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ABSTRACT

Rules for women's bowling and fencing from January 1973 to January 1975 are discussed. Standards in sports for girls and women are detailed along with the Division for Girls and Women's Sports (DGWS) statement of beliefs. Specific articles dealing with bowling skills, norms, and rules for women are included. Articles are also included on the techniques, rules, and teaching of fencing. Bibliographies on both bowling and fencing are presented. (BRB)

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Bowling–Fencing

GUIDE

JANUARY 1973 – JANUARY 1975

With Official Rules

Editors

Ethel Docherty, Bowling

Nancy L. Curry, Fencing

SP 006 740

THE DIVISION FOR GIRLS AND WOMEN'S SPORTS

American Association for Health, Physical Education, and Recreation

1.50

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DIVISION FOR GIRLS AND WOMEN'S SPORTS

The Division for Girls and Women's Sports is a nonprofit educational organization designed to serve the needs and interests of administrators, teachers, leaders, and participants in sports programs for girls and women. It is one of eight divisions of the American Association for Health, Physical Education and Recreation. Active members of the Division are women members of the American Association for Health, Physical Education, and Recreation who are interested in sports for girls and women and who participate in the work of the Division. These women are professional leaders in schools, colleges, community centers, industrial plants, military services, public and private clubs, and agencies.

The purpose of the Division for Girls and Women's Sports is to foster the development of sports programs for the enrichment of the life of the participant.

The Division for Girls and Women's Sports attempts to promote desirable sports programs through:

1. Formulating and publicizing guiding principles and standards for the administrator, leader, official, and player.
2. Publishing and interpreting rules governing sports for girls and women.
3. Providing the means for training, evaluating, and rating of officials.
4. Disseminating information on the conduct of girls and women's sports.
5. Stimulating, evaluating and disseminating research in the field of girls and women's sports.
6. Cooperating with allied groups interested in girls and women's sports in order to formulate policies and rules that affect the conduct of women's sports.
7. Providing opportunities for the development of leadership among girls and women for the conduct of their sports programs.

SPORTS GUIDES AND OFFICIAL RULES COMMITTEE INTEREST INDICATOR

The SGOR Committee is endeavoring to broaden its base of personnel and to strengthen its services to *Guide* readers. The purpose of this form is to offer readers an opportunity to join us in meeting this need. Please complete this form and send it to the SGOR Associate Chairman-elect, whose name and address appear on page 16.

Name_____

Professional Address_____

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1. Check the Sport Committee(s) which would be of interest to you:

_____ Aquatics	_____ Flag football	_____ Speedball
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_____ Basketball	_____ Lacrosse	_____ Track and Field
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2. Would you like to serve as a member of a Sports Guide Committee of your interest?* _____Yes _____No
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*You may serve on only one Sport Guide Committee at a time.

DGWS STATEMENT OF BELIEFS

We believe that opportunities for instruction and participation in sports should be included in the educational experiences of every girl. Sports are an integral part of the culture in which we live. Sports skills and sports participation are valuable social and recreational tools which may be used to enrich the lives of women in our society.

We believe that sports opportunities at all levels of skill should be available to girls and women who wish to take advantage of these experiences. Competition and cooperation may be demonstrated in all sports programs although the type and intensity of the competition will vary with the degree or level of skill of the participants. An understanding of the relationship between competition and cooperation and of how to utilize both within the accepted framework of our society is one of the desirable outcomes of sports participation.

We believe in the importance of physical activity in the maintenance of the general health of the participant.

We believe that participation in sports contributes to the development of self-confidence and to the establishment of desirable interpersonal relations.

For these reasons, *we believe* that girls and women of all ages should be provided with comprehensive school and community programs of sports and recreation. In addition, they should be strongly and actively encouraged to take part in such programs.

PROGRAM

We believe that sports programs for girls and women should be broad, varied, and planned for participants at differing levels of skill. There should be full awareness of the wide span of individual differences so that all types, ages, and skill levels are considered in the planning of sports programs. In conducting the various phases of sports programs, principles must guide action. These principles should be based on the latest and soundest knowledge regarding

1. Growth and development factors
2. Motor learning
3. Social and individual maturation and adjustment
4. The values of sports participation as recognized in our culture.

Elementary Schools (grades 1-6)

We believe in planned, comprehensive, and balanced programs of physical education for every girl in the elementary program. These

should provide experiences in basic movements – for example, skipping and simple dance steps, bending, reaching, and climbing – and in a wide variety of activities which require basic sport skills such as catching, throwing, batting, and kicking.

We believe that intramural sports experiences in appropriately modified sports activities should supplement an instructional program for girls in grades 4, 5, and 6, and that in most cases these experiences will be sufficiently stimulating and competitive for the highly skilled girl. We believe extramural sports activities, if included in the upper elementary grades, should be limited to occasional play days (sports groups or teams composed of representatives from several schools or units), sports days, and invitational events.

Secondary Schools (grades 7-12)

We believe that in secondary schools a program of intramural and extramural participation should be arranged to augment a sound and comprehensive instructional program in physical education for all girls. Extramural programs should be organized to supplement broad instructional and intramural programs provided sufficient time, facilities, and personnel are available for these additional programs.

Colleges and Universities

We believe that college and university instructional programs should go beyond those activities usually included in the high school program. There should be opportunities to explore and develop skills in a variety of activities, with emphasis on individual sports. It is desirable that opportunities for extramural experiences beyond the intramural program be accessible to the highly skilled young women who wish these opportunities.

Forms of Competition

Intramural competition is sports competition in which all participants are identified with the same school, community center, club, organization, institution, or industry, or are residents of a designated small neighborhood or community.

Extramural competition is a plan of sports competition in which participants from two or more schools, community centers, clubs, organizations, institutions, industries, or neighborhoods compete. The forms of extramural competition include

1. Sports days – school or sports group participates as a unit
2. Telegraphic meets – results are compared by wire or mail
3. Invitational events – symposiums, games, or matches to which a school or sports group invites one or more teams or individuals to participate.
4. Interscholastic, intercollegiate, or interagency programs – groups which are trained and coached play a series of scheduled games

and/or tournaments with like teams from other schools, cities, or organizations.

International Competition involves players from different nations and provides sports experiences for individuals or groups with exceptional ability and emotional maturity. This type of competition under some conditions could include secondary school girls, but usually it is planned for more mature participants.

Corecreational activities are designed to give boys and girls opportunities to participate on the same team against a team of like composition, provided the activities do not involve body contact. The basis for formation of teams should be to promote good team play. While positive experiences for the exceptional girl competitor may occur through participation in boys or men's competitive groups, these instances are rare and should be judged acceptable only as an interim procedure for use until girls programs can be initiated.

ADMINISTRATION

We believe that certain *safeguards* should be provided to protect the health and well-being of participants. Adequate health and insurance protection should be secured by the institution. First aid services and emergency medical care should be available during all scheduled interscholastic sports events. Qualified professional leaders should ensure a proper period for conditioning of players, a safe environment including equipment and facilities, a schedule with a limited number of games, and similar measures.

We believe that sports *officiating* should be the responsibility of those who know and use DGWS approved rules. Officials should hold current ratings in those sports in which ratings are given.

We believe that the entire *financing* of girls and women's sports programs should be included in the total school budget. It is suggested that income be handled as a regular school income item.

We believe that the *scheduling* of sports activities for girls and women should be in accordance with their needs and that their schedule should not be required to conform to a league schedule established for boys and men's sports.

We believe that excellence of achievement should be given *recognition* and that the intrinsic values which accrue from the pursuit of excellence are of primary importance. We believe that, when awards are given, they should be inexpensive tokens of a symbolic type, such as ribbons, letters, and small pins.

We believe that expert teaching and quality programs generate their own best *public relations*. It is suggested that an effective plan be developed for interpreting the values of the sports program to parents, teachers in other fields, and interested members of the

school or college community, including the press. A procedure which has proved successful is to invite key groups to a selection of demonstrations and sports events at different levels, so that they may see effective programs in action.

LEADERSHIP

We believe that good leadership is essential to the desirable conduct of the sports program. The qualified leader meets the standards set by the profession, including an understanding of (1) the place and purpose of sports in education, (2) the growth and development of children and youth, (3) the effects of exercise on the human organism, (4) first aid and accident prevention, (5) understanding of specific skills, and (6) sound teaching methods. Personal experience in organized extramural competition is desirable for the young woman planning to become a leader or teacher of women's sports. The leader should demonstrate personal integrity and a primary concern for the welfare of the participant.

POLICY-MAKING

And finally, we believe that all leaders, teachers, and coaches of girls and women's sports should be encouraged to take an active part in the policy decisions which affect planning, organizing, and conducting sports programs for girls and women. Leaders should make sure that qualified women are appointed to the governing sports bodies at all levels – local, state, national, and international – to ensure that programs are in the best interest of those who participate.

STANDARDS IN SPORTS FOR GIRLS AND WOMEN

Standards in sports activities for girls and women should be based upon the following:

1. Sports activities for girls and women should be taught, coached, and officiated by qualified women whenever and wherever possible.
2. Programs should provide every girl with a wide variety of activities.
3. The results of competition should be judged in terms of *benefits to the participants* rather than by the winning of championships or the athletic or commercial advantage to schools or organizations.

Health and Safety Standards for Players

Careful supervision of the health of all players must be provided by–

1. An examination by a qualified physician
2. Written permission by a qualified physician after serious illness or injury
3. Removal of players when they are injured or overfatigued or show signs of emotional instability
4. A healthful, safe, and sanitary environment for sports activity
5. Limitations of competition to a geographical area which will permit players to return at reasonable hours; provision of safe transportation.

General Policies

1. Select the members of all teams so that they play against those of approximately the same ability and maturity.
2. Arrange the schedule of games and practices so as not to place demands on the team or player which would jeopardize the educational objectives of the comprehensive sports program.
3. Discourage any girl from practicing with, or playing with, a team for more than one group while competing in that sport during the same sport season.
4. Promote social events in connection with all forms of competition.

SOURCES OF INFORMATION AND SERVICE

The various services are offered by committees. All requests for information of services should be addressed to the chairman of the committee into whose field of work the inquiry falls. Inquiries which cannot be readily classified should be addressed to the DGWS vice-president.

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NATIONAL INTRAMURAL SPORTS COUNCIL–A joint council of DGWS and DMA to provide leadership to initiate and to improve intramural programs at all educational levels.
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SPECIAL PUBLICATIONS–see inside back cover.

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[1] Current *Guide* material was prepared by the 1971-73 Committee; material for 1974-76 Guide will be prepared by the 1973-75 Committee.

Bowling and the Individual

JOYCE M. CURTIS

Joyce M. Curtis is an associate professor at Abilene Christian College, Abilene, Texas, where she instructs both girls and coeducational classes in beginning and intermediate bowling. She obtained the B.S. and M.S. degrees from North Texas State University, Denton, and the P.E.D. degree from Indiana University, Bloomington.

Bowling is advertised as being one of the lifetime sport activities that can be learned in today's physical education curriculum. Our emphasis has been that the student will be able to participate in the activity for many years after graduation. However, physical educators must realize that there is more to our discipline than just physical skills to be taught to students.

Kenyon has developed a conceptual model for characterizing physical activity as a sociopsychological phenomenon.[1] He postulated that different classes of physical activities provide different sources of satisfaction for specific individuals. Physical activity is thought to be divisible into six subdomains: (1) as a social experience, (2) for health and fitness, (3) as the pursuit of vertigo, (4) as an aesthetic experience, (5) as catharsis, and (6) as an ascetic experience.

This discussion concerns the probability that individuals can perceive the same activity in different ways. Does bowling elicit different responses from the people participating in the same physical activity?

Bowling as a Social Experience

This is probably the most common rationale for including bowling in the physical education curriculum. Bowling can provide a medium for social intercourse, making new friends, or continuing existing relationships. The provision of coeducational bowling classes provides an opportunity for needed heterosexual experiences for many students. Through the efforts of bowling lane proprietors and the National Bowling Council, bowling has become a family sport and the bowling establishment is no longer thought to be a place of ill repute. Most college student unions have bowling lanes which are one of the major recreational facilities on campus.

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[1] John W. Loy, Jr. and Gerald S. Kenyon, *Sport, Culture, and Society* (London, England: Macmillan Co., 1969), pp. 71-81.

Bowling for Health and Fitness

An activity's contribution to one's health and fitness is a major criterion for adding it to the physical education curriculum. The rationale for including bowling under this criterion is probably questionable. Careful consideration must be given to the specific fitness objectives that bowling is supposed to meet for specific students. However, are there not other objectives to be met by the physical education program?

Bowling as the Pursuit of Vertigo

Vertigo is considered to be pursued by the individual through the mediums of speed, acceleration, sudden change of direction, or exposure to dangerous situations while the participant remains in control. Bowling generally would not be thought to be related to the pursuit of vertigo. However, upon recalling various individual performances, some participants may be in pursuit of vertigo through an extremely fast approach, an extremely long slide on the fourth step, or the absence of a slide with the quick stop and release on the fourth step.

Bowling as an Aesthetic Experience

The factor here to be noted is that physical activity is often thought to have aesthetic value for the participant. It is also thought to possess beauty or certain artistic qualities by the observer. Bowling may be pleasing to the eye of an individual who understands the mechanics and execution of a skilled performance. The grace and coordination with which an expert bowler moves to the foul line may be just as inspiring to one individual as the movement of a modern dancer is to another observer.

Bowling as Catharsis

Bowling is perceived by many as a means of releasing tension developed by frustration in today's business world or home situation. Throwing, not rolling, the ball at the pins and banging them about could be a means of expressing hostility and aggression in a socially acceptable manner. The important factor is that the individual may experience through bowling a reduction of tension created by the pressures of his society.

Bowling as an Ascetic Experience

The long, strenuous, and sometimes painful training and consuming competitive nature of some activities provide a type of ascetic experience for the committed participant. Bowling probably

does not provide any type of ascetic experience for the average performer; however, an individual who desires to be a top performer may perceive his hours of practice and dedication to the game in an ascetic sense.

Jo Ann Houts encourages physical educators to recognize the importance of the performer's feeling and perception of himself and his environment as he is experiencing sport.[2] She feels that we should thoroughly analyze "how it really *feels* to *experience* sport." She further states that it is feeling that makes the sport experience have meaning for the participant. The peak experience or moment of highest happiness or sense of fulfillment in the sport experience is an end in itself, and its worth is felt intensely by the performer, even though he may find difficulty in expressing verbally what he has just experienced.

These peak experiences may be felt by the average bowler on various occasions, such as converting the 6-7, 6-7-10, 4-6-7-10 splits, striking out to win the game, or bowling a high score or a perfect game. For the skilled performer, there is the satisfaction of self-testing and the refined discipline of body and mind required to respond consistently with the perfect timing and precise accuracy needed to roll the ball to a specific board 60 feet away for a resounding strike.

As physical educators, we must realize that there is more to our activities than just physical skill development and some knowledge of rules and history.

[2] Jo Ann Houts, "Feeling and Perception in the Sport Experience," *Journal of Health, Physical Education, and Recreation* 41 (Oct. 1970), 71-72.

Teaching Bowling Skills to the Handicapped

CLARE ALBOM

Clare Albom is supervisor of health and physical education for the Town of Vernon Schools, Rockville, Connecticut. She received the B.S. degree from Arnold College, Milford, Connecticut and completed the M.A. and sixth year at the University of Connecticut, Hartford. She has worked extensively with mentally trainable and physically handicapped children at all school levels.

Trainable mentally and physically handicapped persons can learn the basic concepts required in bowling. They can learn to roll and direct a ball toward a specified object or objects. Depending upon the ability of the individual, several teaching techniques and methods may be utilized by the teacher.

Problem-solving through movement education is a good teaching technique. It allows quick discovery of capabilities by both the teacher and the student.

The movement education approach provides opportunity:

1. for instant success on the part of the student
2. to develop an awareness of oneself and the capabilities of one's body
3. to develop body movements which relate to those required in bowling
4. to develop the balance required by the sport
5. for fun, which is perhaps the most important motivation for the handicapped individual when he finds he can perform immediately and successfully according to his ability.

The following movements are required for the individual:

1. rhythmic activities which include the basic movements of walking, running, sliding, and skipping
2. simple balance exercises such as bending, reaching, stretching, and combinations of bending and stretching, and reaching as far forward as one can
3. ball handling skills of tossing, catching, and rolling.

To develop an awareness of himself and his body's capabilities, the student is guided through prescribed activities based on suggestions and problem-solving methods. The teacher asks the individual:

1. Can you move in a space without bumping anyone?
2. Can you make your body wide, small, tall, etc.?

3. Can you bend and reach forward without falling? How far can you reach?
4. Can you move your arms forward and backward? How far forward can they go? How far backward can they go?
5. Can you walk and move your arms sideways, forward, and backward?

Other basic movements that relate to bowling suggest additional questions:

1. Can you roll a ball?
2. Can you roll the ball forward?
3. Can you roll the ball to a partner?
4. Can you roll the ball between objects?
5. Can you roll the ball to a specific object?

This approach is simple, yet effective because the attention span of the handicapped child may be short. There is participation in many activities which do not require rote learning. There is no pressure to perform something that cannot be done. The space required for the activities is minimal: an all-purpose room, a classroom with moveable furniture, a large corridor, and an outdoor play area are all suitable for movement activities that relate to bowling. Individual abilities can be observed to determine whether or not the student will be able to participate at a bowling center.

Games similar to bowling which are created by the teacher are excellent since they can be geared to the needs of the individual. A few problem-solving games are:

1. Have the individual roll a ball and attempt to hit a large, colorful object.
2. Place two large road markers, cones, or wastebaskets about a foot apart. Participants may line up behind a line 6 feet from the objects.

   A rubber game ball, tennis ball, or softball may be used. The student is asked, "Can you roll the ball between the objects?" If he is successful, move the starting line back to 8 or 10 feet. The game can be made more interesting by placing a plastic bowling pin or similar item between the objects. The individual will see if he can roll the ball in a straight line between objects and strike the pin.

The teacher has the opportunity to make the following observations about the student's activities:

1. Is he stepping forward? If so, onto which foot?
2. Is he bending and reaching forward to release and roll the ball?
3. Does he demonstrate hand-eye coordination?
4. Is he enjoying the game?

Through such games participants are experiencing the pendulum swing, balance, hand-eye coordination, some of the footwork, and

the follow-through used in bowling. The skills can be taught to young children who enjoy games of this nature.

Since the object of bowling is to hit as many pins as possible with one or two rolls of the bowling ball, are steps necessary? If a handicapped person who is unable to walk can sit in a chair or stand at the foul line and roll the bowling ball at the pins, it can be concluded that whatever he is able to do and enjoy should be the objective. If the individual feels he can make an approach, he should be encouraged to try. Those associated with the handicapped know that some cannot learn the four-step approach because of the footwork and armswing coordinations required. The degree of handicap should determine whether or not a step or steps can be taken. Many persons of a higher level of ability have little difficulty learning a three- or four-step approach, while others at a lower ability level may be able to accomplish one step or none at all.

The bowler must learn to hold the bowling ball. A gymnasium bowling ball (plastic equipment) has bored holes for thumb, middle, and ring fingers. There is a simple technique to teach the grip: ask the bowler to compare his hand to a rabbit – the forefinger and little finger are the ears, and the thumb, middle, and ring fingers are the rabbit's teeth. Those fingers which represent the teeth are placed into the bowling ball. Suggest that the bowler hold the ball with the thumb hole, which is larger than the others, closest to his body.

To roll the ball, a problem-solving approach can be used. Simply ask the individual, "Can you roll the ball across the room?" The teacher instead may demonstrate the skill and ask the bowler to repeat what has been done. The teacher can observe:

1. how the ball is released
2. whether or not there is a step forward for balance
3. the distance the ball will roll (strength necessary to move the ball a specified distance)
4. whether or not the individual can release the ball at all
5. whether or not the proper fingers are placed in the ball
6. whether or not the ball is moving in a straight line.

Use of the problem-solving method, followed by a demonstration by the teacher, will serve as a means of reinforcement toward those goals the teacher hopes the student can achieve.

Those who can perform the bowling skills in the classroom or gymnasium will find the transition to the bowling lanes difficult at first because of the confines of the individual lanes. The success of hitting the pins, even only one, will encourage continuation and there will be improvement.

Instructors on the lanes can assist the bowler in the pendulum swing and release by holding the wrist for support since the ball is heavier than the gym ball. Bowling proprietors can be of assistance by providing lightweight bowling balls for those who lack strength.

The classroom teacher, physical educator, and lane instructors should be familiar with no-step, one-step, and several-step approaches. In each, the foot opposite the hand with the ball should be placed forward for balance. Balance is often difficult for the handicapped person who is unable to walk or who is poorly coordinated. He may elect to perform only a pendulum swing and release of the ball. He should not be forced to attempt anything further that may discourage or confuse him. Since the two rhythmic coordinations involved are the armswing and the footwork patterns, the more rhythmically developed the person is, the more likely he is to be able to perform the skills. Rhythmic counts or cues, such as asking the student to reach out with the ball, or out, down, back, and swing forward for the pendulum swing, provide easy understanding and response. The cue words must be repeated several times until meaningful associations are made, and the bowler understands what must be done to perform successfully.

It is advisable that a classroom teacher, physical educator, recreation director, or the person responsible for the program instructs the students in the essential bowling courtesies. In their eagerness, students may forget to consider the bowler on the next lane.

For those not familiar with gymnasium bowling, plastic bowling equipment is available from bowling equipment manufacturers and may be ordered through bowling centers. Plastic bowling balls of approximately five pounds and large plastic pins resemble regular equipment. Included in the sets are plastic templates which can be used to mark lanes in a gymnasium. Areas on the templates are indicated for the pin deck, arrows for spot bowling, and approach dots. A corridor, gymnasium, all-purpose room, and other areas can be converted to a bowling area that closely resembles an actual lane. Plastic bottles and milk cartons painted a variety of colors make interesting bowling pins. It is fun to roll at several of these objects grouped together to resemble a bowling pin deck.

Many handicapped persons can learn to score. Score sheets may be obtained at a bowling center to aid in teaching scoring. An overhead projector is a valuable aid when teaching scoring to groups.

Bowling skills should first be taught in the classroom, gymnasium, or recreation center where all the children have an opportunity to learn the basic bowling skills through simple skill progressions and games. As the bowler's ability develops, the transition to gymnasium bowling should follow, and, finally, the ultimate goal – the bowling center for all those who have the capability to enjoy the activity. Competition and tournaments for the more skillful always create interest and increase motivation.

The success of the program is indicated by the smile of a bowler when the ball strikes the pins!

Behavioral Objectives

ESTELLE FOTSCH

Estelle Fotsch received a B.S. degree from the University of Missouri, Columbia, and an M.S. degree from Washington University, St. Louis, Missouri. She is lecturer at the University of Wisconsin, Madison, coordinator of bowling, and a Ph.D. candidate in physical education specializing in the area of curriculum.

What are behavioral objectives? Why do we need them in teaching bowling?

Behavioral objectives are one way in which an instructor can express what she wishes the student to accomplish within a time limit in an activity. These objectives may be stated in such a way that the individual's performance may be measured against a set of criteria either by the instructor or by the student. The criteria may suggest *minimal* standards for each level of performance.

Many bowling teachers operate successfully without stating their objectives behaviorally; however, it seems advantageous to provide specific behavioral goals by which the student may make a more precise, individual self-evaluation. The objectives should apply not only to the actual level of psychomotor skill, but also to the cognitive realm of the activity. Why not let your students know what you want them to accomplish?

The following chart is an attempt to classify behavioral objectives for two levels of proficiency in bowling. It is used at the University of Wisconsin, Madison Campus. (All specific instructions in the chart apply to right-handed bowlers.)

Concepts	Learning Experiences	Intermediate Proficiency	Advanced Proficiency
1) Kinesthetic perception and retention of the four- or five-step approach	The instructor will present to the student the technique for a correct approach of four or five steps: (a) momentum increases without drift so that the last sliding step is performed with the armswing forward as the ball is released; (b) a smooth release should be executed just beyond the foul line; (c) at the end of the approach the student will be in balance with the trunk and shoulders forming a line parallel with the foul line, toes of leading foot pointed toward the pin area.	The student will be able to demonstrate a four-or five-step approach	Same
2) Speed of an underhand pattern (Time)	The instructor will help the student perceive kinesthetically, and produce mechanically, adequate speed for the task.	The student will be able to perform an underhand delivery using the proper approach indicated in the first set of learning experiences (#1 above) so that the ball travels from the foul line to the head pin within a time limit—not more than 2.8 seconds and not less than 2.2 seconds.	Same

Concepts	Learning Experiences	Intermediate Proficiency	Advanced Proficiency
3) Accuracy of release and aim	The instructor will present several methods of aim and point out advantages of each.	The student will demonstrate the ability to use range finder for point of release and point of aim so that total deviations from her individual set of points will not exceed 1.5 boards (dots, .50; darts, 1.0).	Deviations not to exceed 1.0 boards
4) Accuracy of first ball-pin contact	The student, on each *strike* ball (first ball rolled in each frame), will make ball-pin contact at the 1-3 pocket.	The student will obtain a first ball average of not less than 6.5 by being able to deliver the ball to the 1-3 pocket at a proper angle for a strike.	First ball average of 8.0.
5) Accuracy of second ball-pin contact	The instructor will present types of spares and instruct the student in making spares.	The student will be able to produce a second ball percent* of 60 or better in attempting to clear the lane with the second ball of each frame.	Second ball percent* of 60 or more.
6) Cumulative score	Perfect score is the ultimate goal.	The student will score in three games an average of 125 or more.	The student in three games will average 150 or more.

*Second ball percent = $\frac{\text{number of pins down on second ball}}{100 - \text{first ball total}}$

Concepts	Learning Experiences	Intermediate Proficiency	Advanced Proficiency
7) Knowledge of basic principles, criteria for self-evaluation, terminology, sequences, scoring, etc.	Methods of scoring will be presented by the instructor and ample opportunity will be given for students to apply them. In addition to class instruction, a text is recommended and supplemental readings suggested so that students may have adequate knowledge of the skill.	Given a departmental test, the student will answer correctly 84 percent of the questions. Other evaluative measures may be made throughout the course.	The student will answer correctly 90 percent of the questions. Other measures may be taken during the course.

Beginner Bowling Made Easy

JEANINE BENNETT

Jeanine Bennett is at the University of Oregon, Eugene. She received the B.A. and M.S. degrees from the University of Washington, Seattle, and is presently working on the Ph.D. degree at the University of Oregon, Eugene. She is instructor of the women's bowling classes and works with junior bowling programs and adult instruction; instructor certifications from the American Junior Bowling Congress, the American Machine and Foundry Company, and the Brunswick Corporation; and intercollegiate competition and league play.

The bowling teacher has many variables to consider in determining which concepts to include in her program to develop beginner delivery form. She should eliminate unnecessary and time-consuming skills so that she can provide earliest development of accuracy with a minimum of concepts to be remembered.

The hook ball delivery with spot aim is generally accepted by experts as the superior delivery. Studies of college and high school beginner bowlers indicate that this technique is as effective as other methods. Teaching the hook-spot technique and getting students to understand the concepts are easy when all stroking is organized into three distinct groups with only two address positions and three aim and final target points. The first stroking group includes the strike ball and the spare leaves in the center of the pin deck. The second stroking group concerns the left side-of-the-lane spares. The third group is the right side-of-the-lane spares.

For all three stroking groups, the preferred tight hook delivery may be used. At point of ball release, the thumb is in the 10:00 to 11:00 o'clock position and the fingers are at the 4:00 and 5:00 o'clock positions. The same arm swing and footwork patterns are used for all three groups. Techniques for the left-handed student are identical but performed from the opposite side of the lane.

In the address or stance position for the first stroking group the feet straddle, or the left foot is on, the center dot of the group of dots 12 feet from the foul line on the approach. The reason for the centered position is to have the arm swing and ball release occur above the board containing the second arrow from the right channel. It is generally accepted that the second arrow is the aim point, and the five pin spot (the painted circle upon which the five pin sits) is the target over which the ball must roll for the strike. For the beginner, this spot may serve the same function for the spare leaves in the center of the pin deck (1, 3, 5, and 8 pins, and their combinations). (See Figures 1 and 4.)

The address position for the second stroking group is identical to that of the first group. The four pin spot is the target over which the ball must roll for the left side-of-the-lane spares (2, 4, and 7 pins, and their combinations). The *only* adjustment in the delivery technique involves aiming and stroking approximately five boards to the left of the arrow used for the strike ball – the ball is released above the *third* arrow from the right channel. (See Figure 2.) The change in arm swing pattern is so slight that it can occur naturally as the bowler sights the aim point. As noted by Broer in *Efficiency of Human Movement,* a slight change in the release point may create a considerable change in direction of ball roll as it moves toward the pin deck.[1] Thus, a greater cross-lane trajectory will allow the ball to roll toward the four pin spot. When correctly rolled, the ball hitting the four pin spot squarely must also roll over the two and seven pin spots on its path to the pit.

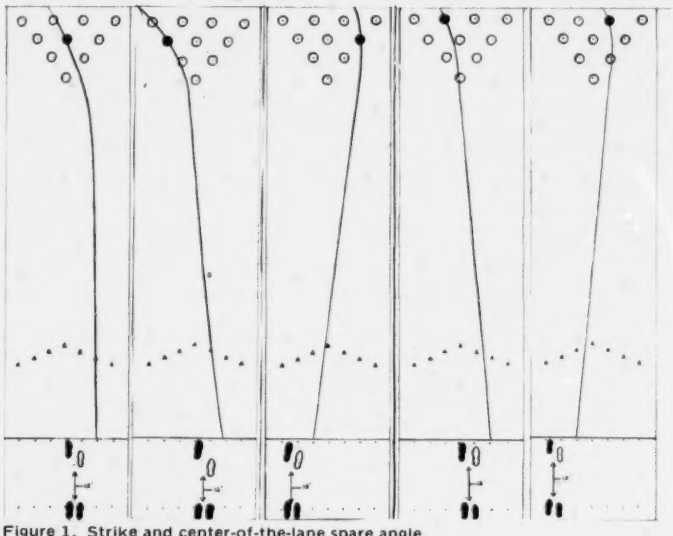


Figure 1. Strike and center-of-the-lane spare angle.
Figure 2. Left side-of-the-lane spare angle.
Figure 3. Right side-of-the-lane spare angle.
Figure 4. Adjustment in aim point to cover fully 8 pin spot.
Figure 5. Adjustment in aim point to cover fully 9 pin spot.

[1] Marion R. Broer, *Efficiency of Human Movement* (Philadelphia: W. B. Saunders Co., 1966).

For the third stroking group the only change in address position involves moving to the far left of the approach in order to aim properly for the right side-of-the-lane spares. The six pin spot may be considered the target over which the ball must roll for this group (3, 6, 9, and 10 pins, and their combinations).

For the left-handed bowler, the left side spares require a move to the far right of the approach, and the painted circle upon which the four pin sits is the target. It should be noted that this change in stance *retains* the cross-lane theory and demands the use of the same approach, footwork, arm swing, and ball release patterns previously learned.

Accuracy is increased when emphasis is placed on a straight approach to the foul line. The center arrow, or an area near that arrow, is the aim point. (See Figures 3 and 5.) This aim point should remain flexible to accommodate the form unique to the individual. The bowler's fear of the channel may make an otherwise correct delivery become erratic when spares near the right side of the lane are attempted. For those consistently channeling the ball, the aim point may briefly be shifted to the left of the center arrow. As the bowler realizes that the ball will stay on the lane, the aim point and follow-through can be eased toward the right until the spot is squarely hit. Emphasis is directed to a full, smooth follow-through toward the aim point and the final target.

Time for accuracy development and individual help is greatly increased when ideas are kept simple – two address positions and three aim points with their corresponding final targets. The student readily understands how to deliver the ball for each of the various (1,024) pin combinations. This method leads naturally and easily to playing to lane conditions and to refinement of strike and spareshooting skills.

The whole, as opposed to the part, method of instruction may be used to briefly introduce the approach, timing, and release prior to presentation of the above concepts. It is desirable to use pins during practice as much as possible; however, during initial delivery skill development many students feel an urgency to hit pins in any fashion. This sense of urgency may be eliminated by using an instamatic mechanism or removing the pins from those machines without the mechanism. A dummy pin hanging from the four, five, or six pin cell provides a target over each key pin spot and immediate feedback of delivery accuracy. The point of aim is easily emphasized and enlarged by a five-inch strip of bright gym marking tape placed across that arrow or lane dart. The student may enjoy early self-testing by keeping a record of his successes in rolling the ball on or near the aim point and in hitting the target. Through skillful guidance, most students soon realize that one can make small

adjustments in aim point to get slight variations in trajectory, such as slightly changing the point of aim to squarely hit the number eight pin instead of the number four or number five pins.

Where a concourse is available, one can prepare a *pin deck* with regular pins. An "airplane view" of how the ball moves into the pins and how the pins and ball react in any given set-up is provided as the instructor manipulates the ball into the pins. This is an excellent device to demonstrate that the same delivery can be used for many similar split and spare leaves, such as the 2-7 and the 2-4-7.

The instructor must decide whether scoring too early in accuracy development adds a degree of tension or competition that can destroy the acquired mental and physical discipline desired for continued skillful stroking. With or without scoring, strike and spareshooting practice is fun when a period or two is provided for a version of Scotch Doubles, a partnership game. For classroom purposes any number per lane may play. The first person rolls at a first ball set-up after which the next person attempts to pick up the pins remaining for the spare. This cycle is repeated with all students at that lane until a line is completed. Scoring may be used, or the instructor may set a time limit.

Scoring instruction should be concise. To enhance understanding, every student can complete a take-home scoring assignment. This assignment immediately identifies individual scoring problems. Bowling pamphlets, available at all bowling establishments, provide a scoring reference. While accuracy develops, it is not too early to teach or to expect the beginner to use recognized league methods and courtesies. During the latter half of the unit, a record of team wins and losses, which can be prepared by a student assistant, becomes a strong motivator to practice for the accuracy needed to achieve high scores.

Bowling — Timing and Form

LOU BELLISIMO

Lou Bellisimo, author of the popular Bowler's Manual,[1] *has been at the University of Oregon as a senior instructor of physical education for 22 years. He has scored 300 in six games and is a member of the American Machine and Foundry Company (AMF) Staff of Champions. A member of the National Bowling Council, he is recognized as one of the nation's top bowling instructors and coaches. He is a 12-year member, and past Western Director, of the Professional Bowlers' Association.*

Bowling is an easy sport to learn, and it is easy to teach because it is basically *two simple movements* which nearly everyone can do. The first movement is the *swing of the ball* (pendulum swing) and the second is the necessary steps to fit the swing. Of course, to become really proficient and master the sport is something else.

The ball is rolled 60 feet down the lane in an attempt to hit an area approximately one inch wide. Just one inch, one board, is the width of the pocket area that will nearly always produce a strike. The ability to hit that one-inch pocket consistently separates the pros from the rest, yet whatever your age or bowling ambitions, all who participate can enjoy the game.

Three Simple Methods

Bowling is easy to teach when using my methods because I have broken down the instruction process to *three simple methods.* These are: *the trial swing, the dry run,* and the *one-step delivery.*

First is the trial swing, as illustrated in Figure 1. Two things are vital to understanding the trial swing: (1) the feet are never moved, and (2) the ball is never rolled. The feet are stationary while the arm makes a complete out, down, back, and forward motion. *Warning:* Beginners, especially, should not take a trial swing anywhere but on the approach facing the pins because the ball might slip.

Second is the dry run, as illustrated in Figure 2. The dry run is simply the complete approach from the stance position to the delivery *without* using the ball. Like the trial swing, it is invaluable for correcting various faults.

Third is the one-step delivery, as illustrated in Figures 3 and 4. This maneuver is, in essence, the last step of the approach. To execute the one-step delivery, the bowler walks up to within four

[1] Lou Bellisimo, *Bowler's Manual* (New York: Prentice Hall, 1969).

feet of the foul line, swings the ball out, down, and back to the top of the backswing. As the ball starts forward from the top of the backswing, the bowler takes one step forward with the left foot (right-handed bowler) and delivers the ball.

There they are – three simple methods that can be used to correct just about any bowling fault. The bowler may become more kinesthetically aware of the correct delivery form by taking the one-step approach and delivering the ball than by taking the full approach. It is much easier to take the trial swing from a stationary position than it is to swing the ball in a pendulum manner while taking steps. It may be easier in the early learning stages to develop good timing and delivery form by making the approach without the ball.

Figure 1.
Trial swing.

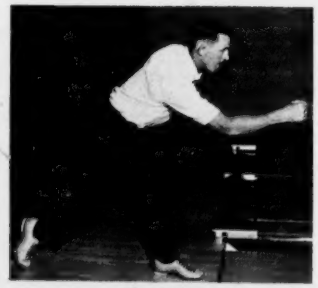
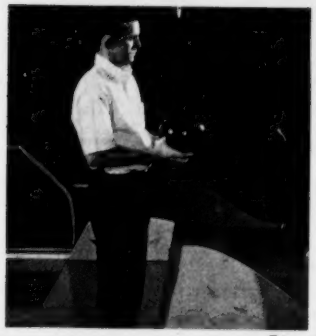
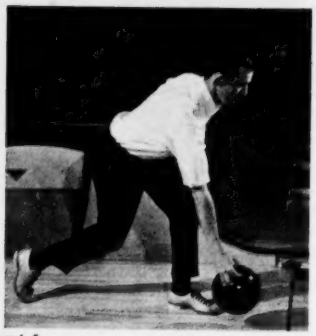


Figure 2.
Dry run.





Figures 3 and 4.
One-step delivery.

Timing, Delivery Form, and the Ball

Good bowling form can be broken down into the following percentages: 80 percent *timing*, 15 percent *delivery form*, and 5 percent *ball handling*. Proper instruction in basic fundamentals makes it much easier to incorporate these percentages into a good bowling technique. In our position as instructors of college and secondary school bowlers, we should place smooth timing and good delivery form above scoring during the learning phase. After all, the ones we teach will be bowling for 50 or 60 years, so teach them the correct way and it will benefit them in the long run.

Timing will be analyzed first, since it is the most important. Timing is the coordination of the feet with the swing of the ball. The ball must swing freely and easily, like the pendulum of a clock, with no hitch or forcing at any point in the swing. Good timing is the most delicate part of bowling, and certainly a matter of finesse even for the pro. The pro knows that he needs precision timing to consistently reach the pocket. To summarize briefly, the ball *must be released beyond the foul line naturally, without forcing,* as shown by the bowler in Figures 5, 6, and 7.

Figure 5.

Figure 6.
Timing.

Figure 7.

The number of steps taken is immaterial; however, you will find that four or five steps generally will be adequate. Notice that the ball and the front foot arrive at the release point simultaneously. Perfect timing, a perfect "stroke" as it is referred to by the pros, continues all the way to a smooth follow-through.

Compare the preceding photographs with the bowler in Figures 8 and 9. This bowler is *ahead of the ball;* that is, the front or slide foot arrived at the foul line while the ball (arm swing) was still near the top of the backswing and just starting the forward thrust. The steps

obviously were too fast for the arm swing. Figure 9 clearly shows the results of the error. The bowler had to force the forward swing in trying to *catch up,* thereby causing him to drop the ball.

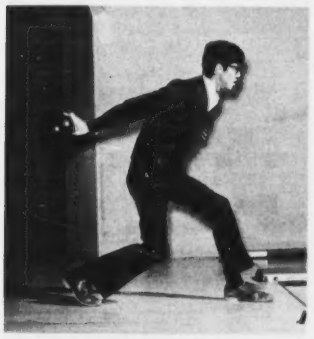


Figure 8.

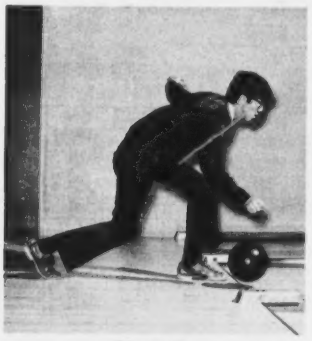


Figure 9.

Ahead of the ball.

Delivery form, and the position of the body at the foul line as the ball is delivered, can be considered to be 15 percent of good bowling technique. Delivery styles are affected by many factors: the bowler's size and strength, his natural coordination, the speed of his swing, and the length of his steps. Nevertheless, every student can develop good delivery form by remembering these three fundamentals: (1) face straight ahead as you deliver the ball and follow through, (2) maintain your balance as you complete the slide and delivery at the foul line, and (3) swing your arm in a straight pendulum motion and follow through directly to your target. No attempt is being made to stereotype form. Any style is acceptable if it incorporates these three parts. As long as the bowler can deliver the ball, then "pose" momentarily, the chances of being consistent are enhanced considerably.

Figures 10 and 11 illustrate perfect delivery styles. Each exhibits the three fundamentals perfectly. Bear in mind that the right shoulder is the pivot point for the pendulum swing and that the arm must be able to swing in a straight line over the intended path of the ball. This becomes more difficult when the shoulders are not parallel to the foul line. The most important single feature of a good delivery is that the left knee is bent and the left leg supports almost all the body weight. A bowler's delivery form is good if he can look straight down over his front knee and see his toes pointing straight ahead.

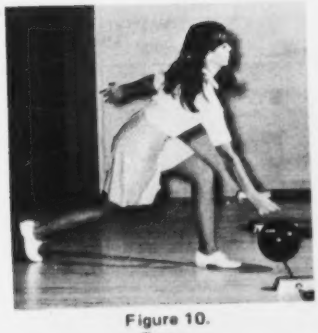


Figure 10.
Form.

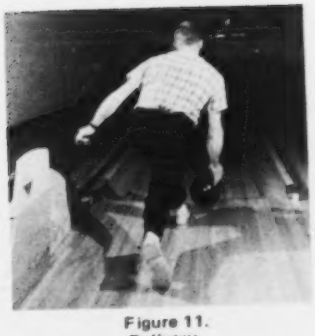


Figure 11.
Delivery.

When shooting for the strike pocket, a bowler rolls the ball 60 feet down the lane and expects to hit an area no wider than one inch. Obviously, then, the bowler who is able to place the ball on the same board at the foul line every time will have a much better chance of being consistent. For example, let us analyze the two styles shown in Figures 12 and 13. Both bowlers roll a "track ball" (a ball that rolls straight down the 10th board then breaks into the pocket). Their target is the second arrow, which is on the 10th board. Therefore, they concentrate on rolling the ball over this target. They *do not* watch the foul line target. In a sense, they depend on instinct and practice to help them place the ball on the 10th board. Obviously, then, the bowler in Figure 13 with the good straight-ahead style has a much better chance of accomplishing this major objective than the bowler in Figure 12 using the turning style.

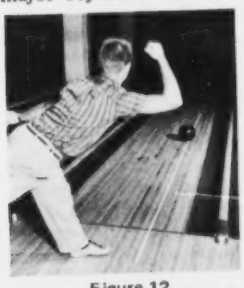


Figure 12.
Poor delivery style —
Turns at the line.

Figure 13.
Good straight ahead style.

I suppose the spot at the foul line could be compared with the rear sight of a gun. You would not be a very accurate shot if the rear sight moved to the left or right, would you? Yet, this is what the bowler does when he twists and turns at the foul line – like the bowler shown in Figure 12. There are far too many who bowl like this. They simply vary too much when they turn and cannot possibly be accurate and consistent. Always remember that one-inch pocket at the other end.

The last 5 percent of good bowling technique is ball handling, or the merits of one good ball roll over another. All top bowlers roll a hook ball. Why? Because it will get more strikes. Figures 14 and 15 show the normal strike pattern. Notice that the ball hit the 17th board, slightly to the right of the center of the head pin. If the ball is

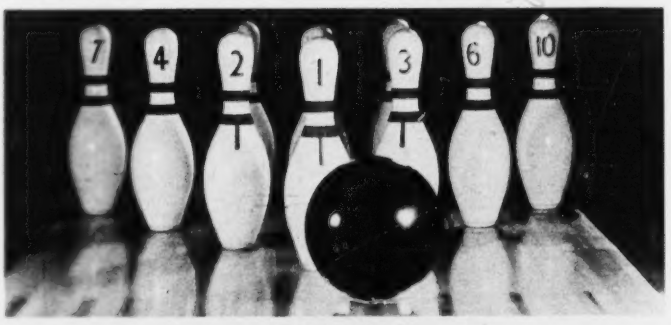


Figure 14.

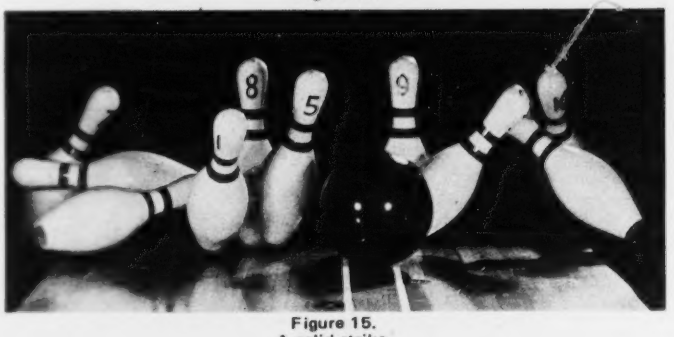


Figure 15.
A solid strike.

to be effective, contact with the head pin must deflect it *as little as possible.* Regardless of the angle from which it comes into the pocket, the ball *must* hit on the 17th board and *then continue straight back without deflection.* If it does not, there will likely be a number 10 pin leave. A deflection of a mere ½-inch after contact with the head pin will cause the ball to more fully hit the 3 pin, which will, in turn, cause the 6 pin to fall in front of, and around, the 10 pin. Compare Figures 14 and 15, which show a solid strike, with the 10 pin tap shown in Figures 16 and 17. The same bowler hit on the 17th board, only this time she did something different and the ball deflected approximately ½-inch after it made contact with the head pin. However, a solid hit like this will produce a strike most of the time.

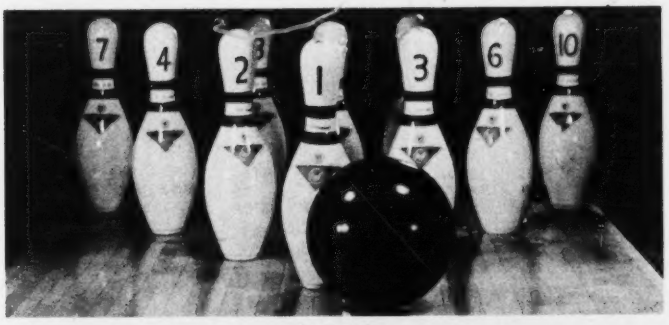


Figure 16.

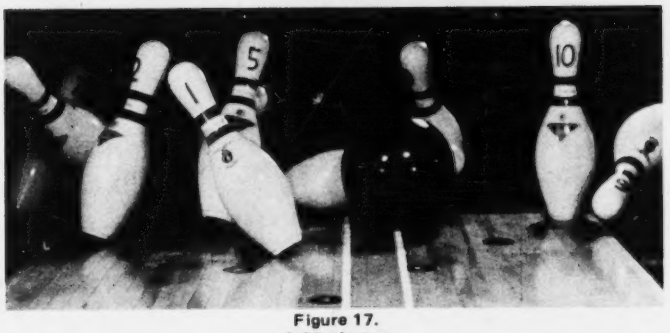


Figure 17.
A 10 pin tap.

The ball must be driving to the left and into the pocket when it hits the pins. Applying a spin or *lift* to the ball as it is released causes it to curve *into the pins;* this is called "digging and driving," and accounts for the "bigger pocket" by the stronger rolling hook ball as it drives from right to left.

Rolling the Hook Ball

Figures 18 and 19 show the perfect hand and wrist position for rolling the hook. The wrist is rigid, not "broken," and the fingers are "closed" to apply the vertical lift for the hook spin. As the ball slides off the thumb, the fingers lift counterclockwise to impart the hook spin, or lift, to the ball.

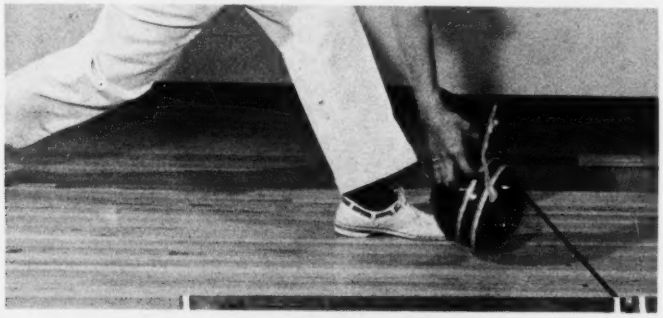


Figure 18.

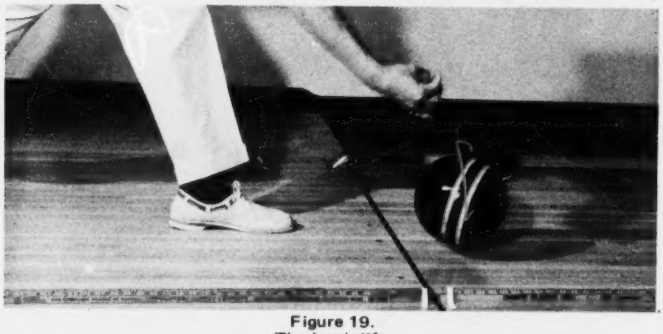


Figure 19.
The hook lift.

Notice that the thumb points to approximately the 10:30 o'clock position. This places the fingers between the 4:00 and 5:00 o'clock positions.

Many beginners, especially women, roll a straight ball. The straight ball is released with the thumb pointing to approximately the 11:30 o'clock position. This places the hand behind the ball so that it rolls straight down the lane like a wheel. The bowler who rolls a straight ball must be certain to keep the thumb and fingers in this position the instant the ball is released. It is easy for the thumb to slip beyond the 12:00 o'clock position and cause the undesirable back-up ball. For the woman whose ball is simply too slow, the straight ball is fine for a starter. However, it should be rolled from the *corner* of the lane. Take advantage of the angle at which the ball reaches the pocket to combat the excessive deflection.

The Role of Feedback in Bowling

ANNE ROTHSTEIN

Anne Rothstein, an assistant professor at Herbert H. Lehman College, Bronx, N.Y., received her M.A. and Ed.D degrees at Teachers College, Columbia University, New York City. She conducts research in motor learning and is the editor of Bridging the Gap, *a newsletter in which research is applied to the teaching of physical education. Some of her current research interests are related to the teaching and learning of bowling.*

It has been established that practice alone is not sufficient to produce learning. The performer must be aware of the results of the practice. There are two elements in every performance: the *process*, i.e., how the performer does the action, which is commonly called form, and the *product* which is the result of the performer's attempt. In bowling, the process is everything the bowler does from the initial stance to the completion of the follow-through. The product is the number of pins knocked down. The performer usually receives feedback on every trial because she sees the pins fall. The more pins knocked down, the more successful the process, or so the student infers. As every teacher knows, this is not always the case, but in terms of success, the pinfall is often a powerful reinforcer. The learner will tend to repeat those actions which have led to success even though they may not be the most effective in terms of future success. How can the teacher focus attention on achieving success in the process rather than on the product? How can feedback be utilized to help the student achieve consistency in the process, and, therefore, greater success in the product?

Several techniques to focus attention on the process and to provide process feedback are available. These vary in cost, ease of use, and effectiveness. Some may not have been used to any great extent in bowling; however, their use may lead to greater success for the student. Two commonly used modes of communication are verbal and visual. The verbal techniques can include teacher comments, feedback from a simple checklist which indicates gross errors, or a detailed checklist which indicates the finer points of performance. Visual methods include observing a demonstration of correct and incorrect movements; noting correct and incorrect techniques used by others; and viewing photographs, single frame polaroid pictures, multiframe polaroid pictures, strobe photography, movies, and videotape.

Verbal Feedback Techniques

The best time for providing verbal feedback may be during a period of shadow bowling. Shadow bowling allows practice without pins, which eliminates the distraction of the feedback from observing pinfall and may aid the student to focus on the process.

In a complex activity such as bowling, the use of the terms right-wrong or correct-incorrect have limited value unless applied to a specific portion of the stance, approach, release, or follow-through. Such information should describe *what* is wrong and *how* to make corrections. A simple checklist for use with beginning bowlers can focus on the gross motor behaviors. It should be structured so that completion can be by the teacher, performer, or another student. The initial part of the checklist related to stance may include the following key questions. Is the ball waist high? Chin high or chest high may be used if preferred. Am I relaxed? Are both hands supporting the ball? Are my elbows close to my side? Are both feet firmly on the floor? Is my weight on the left (right) foot? Questions may be prepared in more detail to deal with the finer points for more advanced levels of performance. The checklist enables students to focus on one error at a time and to refer to the list at any time. Structured from the learner's viewpoint, the checklist may be used in combination with the visual methods discussed below.

Visual Feedback Techniques

A simple type of visual feedback is demonstration of errors. Because it may be difficult for the teacher to demonstrate an error accurately, attention may be directed to a similar error in another individual.

A student may be so attuned to the kinesthetic feel and "correctness" of swinging her arm across the front of her body on the follow-through, for example, that change in performance may be difficult to visualize. Although frequently reminded, or asked to "freeze" so the finish position may be seen, a student may still not associate the error with her performance. Methods, such as pictures, that provide a visual image of the performer in action are usually effective in initiating change.

One must consider, however, the time elapsed between the performance and the availability of photographs and movies which need to be processed. A key to effective visual feedback is the ability of the student to associate the picture of herself with the memory of what she did. If the feedback is unduly delayed it is unlikely that the relationship will be made. If more effective visual feedback is unavailable, the method may be useful for beginners who tend to repeat errors.

Visual methods that may overcome the drawbacks just discussed are polaroid pictures and videotape. The initial outlay for videotape equipment, although expensive, may be the most reasonable in the long run since tapes may be reused. However, it must be maintained regularly and can be damaged easily through misuse. The polaroid camera is probably the best for all-around use since it is easy to operate, least expensive initially, and less susceptible to damage.

The two polaroid techniques available are the standard single picture type, which will give only a single segment of the total movement, and the multiframe type, or graph-check-sequence camera, which will photograph eight separate segments of the movement on the same print. Either of these will provide instantaneous information and can be used with a checklist so students can evaluate their performance.

It is crucial that the use of any visual technique be directed. The student must be instructed as to what to look for in a photograph. The checklist combined with the visual image helps to focus attention on appropriate elements of the performance. The student may compare her picture with another of a correct performance. A third use may be to assign the student the task of describing the correct and incorrect points in the photographs of herself.

Use of the checklist in combination with the videotape is perhaps the most effective method of providing feedback about performance. With more sophisticated equipment split-screen techniques can be used to provide two different views of the student simultaneously, or of the student and an expert performer.

To focus the learner's attention upon the movement process may result in more rapid improvement. It is not assumed that there is a *best* form; however, if the student can become more consistent in what she does without decreasing her efficiency, pinfall should increase. To this end it is suggested that visual methods are best and that immediate feedback is crucial. Student attention to performance may be further focused by use of a checklist. The standard and graph-check-sequence polaroid cameras, or the videotape used in conjunction with a checklist and/or a picture of correct performance may be the most effective means of providing immediate performance information to insure a positive effect on learning.

Visual Feedback for Spot Bowling

JACQUELINE SHICK
JERALYN J. PLACK

Jeralyn J. Plack and Jacqueline Shick received their Ph.D. degrees from the University of Minnesota, Minneapolis. Jeralyn Plack is currently at Michigan State University, Lansing, and Jacqueline Shick is at the University of Minnesota. Both are league bowlers and bowling instructors. Jeralyn Plack has been a coach of college women bowlers.

Spot bowling is a technique that can increase accuracy for the majority of bowlers. However, the skill may be difficult to master since the feedback is somewhat complicated for the novice to interpret. For example, the bowler might spot the second lane dart in an attempt to hit the 5 pin and discover that the ball missed the pin. She probably either hit the spot but missed the pin, or missed the spot and the pin. In the first case, the corrections relate to the delivery – the stance, approach, release, and type of ball rolled. In the second situation, the correction relates to developing the concentration needed to be aware of whether or not the point of aim was hit. This ability to concentrate is important since most bowlers do not watch the lane darts long enough to perceive the point at which the ball crosses them. Until the learner develops this ability to concentrate, spot bowling will not be meaningful or helpful. An early task of the bowling instructor is to teach the learner to watch the spot. There are several aids which can provide the necessary visual feedback to enhance the learning experience.

Some methods require minimal preparation and expense. Visual feedback can be provided by using two folded washcloths placed on the lane bed on either side of the desired spot. If the ball touches one of the cloths and causes it to move, it is immediately evident that the spot was missed. Further, the bowler will know if she went to the right or to the left of the spot.

Another relatively inexpensive device is the "flag." This apparatus consists of a ½-inch dowel (36 inches long) from which a lightweight cloth (33 by 33 inches) is suspended. The dowel is drawn through a 1½-inch hem in the upper edge of the cloth. Map tacks may be used to prevent the cloth from sliding on the dowel. A student standing in the channel just beyond the middle lane dart, or about 16 feet from the foul line, holds the flag over the lane bed so that the pins cannot be seen by the bowler. This helps the bowler to concentrate on the spot until after she has delivered the ball. Much like a bullfighter

lifting his cape, the student raises the flag after the ball has passed the darts.

A more sophisticated aid can be constructed by the school custodians or students in shop class. The dart indicator consists of a framework to which metal, plastic, or wooden indicators (¾-inch wide) are hinged. The base of the framework sits either in the channels or on the ball returns so that the indicator is suspended over the lane bed. The attachment should be positioned so that it will be displaced *only* when the ball crosses *directly* over the desired spot. (See Figure 1.) The indicators should be constructed in such a way that they can be moved to various positions on the frame. Thus, the teacher can indicate to the student the correct spot by the placement of the indicator.

The above aids offer immediate and conclusive visual information concerning the spot at which the ball crossed the alley darts. This serves to eliminate the inferential facet of spotting and should facilitate learning for most students.

Figure 1. The dart indicator.

See the Spares

GENEIVE HINGST

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If a bowler wishes to score well she must learn to convert spares consistently. A consistency in spare conversion allows a bowler to maintain a very respectable bowling average. Because spare bowling is of great importance to achieve success, the knowledge concerning spare conversions should become an integral part of every bowler's equipment. Bowling instructors should give high priority to the spare conversion techniques. The important concepts, though, are difficult for the students to learn through written and oral presentations.

Before the introduction of the automatic pin-setting machine, students frequently were called upon to set the pins for each other, which provided an opportunity to observe the peculiarities of the problems concerned with spares. The handicap caused by technological advance may be overcome, however, by construction of an inexpensive and realistic visual and manual aid. A facsimile of the pin deck is placed on the front of an approach, behind the benches, or wherever it is within view of all students. Use of regular pins and a bowling ball on this pin deck permits vivid demonstration of the variables involved. A pin deck placed where it does not interfere with the bowling lanes and approaches permits students to return throughout a class period for reference in planning their conversion attempts. This is particularly helpful if an unusual spare is involved.

Many principles concerning momentum, action-reaction, angles of deflection, and ball spin can be graphically illustrated. This may be done by the instructor who kneels beside or slightly in front of the head pin and rolls the ball with varying spin at select targets and pin leaves. The following list of demonstration and discussion topics is presented to illustrate some of the potential uses for the facsimile pin deck.

A. General Information
   1. How heavy are the pins and the ball?
   2. What effect does the weight of the ball have on pinfall?
   3. What is the diameter of the ball and of a pin?
   4. How much space is there between the outside edges of two adjacent pins?

5. How much space is there between pins directly behind each other?

B. Ball Action
   1. What is the ball deflection for a hit in the strike pocket by a straight, hook, or back-up delivery?
   2. What effect does the angle that the ball enters the pins have upon subsequent pinfall?
   3. How can ball deflection be used to pick up spares?
   4. How large is the target area when attempting to convert a single pin?
   5. For specific spares, which pins must be covered by the ball?

C. Pin Action
   1. How does the fullness of the hit on a pin affect pin deflection?
   2. How can pin deflection be used to convert spares?
   3. For specific spares, which pins must be covered by other pins?

D. Problem Spares
   1. What plan must be made to convert spares involving sleepers – for example, 2-8; 3-9; 3-6-9; 1-2-5?
   2. What problem develops when the head pin remains standing in addition to a pin in the back row – for example, 1-3-8; 1-3-6-8-10; 1-2-9; 1-2-4-7-9?
   3. Where does the ball need to be placed on the following splits: 2-7; 3-10; 4-5?
   4. What additional problems are present when splits occur with pins remaining in the middle and to the far side of the pin deck – for example, 5-10; 3-7; 4-10; 6-7-10?

The vast majority of bowlers sprinkle strikes more or less generously throughout their games because of skill or luck. To maintain consistently a respectable bowling average one needs to be able to convert spares. Therefore, skills and knowledge necessary for converting spares should be emphasized in teaching a bowling unit. Students' knowledge and understanding of spare conversions are greatly increased when a realistic visual and manual aid is used. As soon as the basic fundamentals and problems involved in spare conversions are taught, students may review as often as they wish. Additional spare conversion problems can also be set up to reinforce prior learnings.

Construction of Pin Deck Model

The facsimile pin deck is easy to construct or one may prefer to use the template from the Gym Bowl Kit. In making a pin deck model, the following materials are needed: a sheet each of heavy wrapping paper and clear plastic measuring 50 x 40 inches, felt marking pens, and a compass.

Instructions:

1. Make the original drawing on heavy wrapping paper.
2. Outline the pin deck in width (42 inches) and depth (36 inches).
3. Draw a line from the front center of the pin deck outline to each corner and from the apex to the base of the triangle that is formed by the lines.
4. Locate pin at the apex, then proceed to the back line, placing pins on lines which are 12, 24, and 36 inches.
5. To find the proper distances from one pin to another, measure 12 inches from the center of the base of one pin to the center of the base of the next pin. The base of a pin is 2¼ inches in diameter.
6. Draw a circle 5 inches in diameter around the center of the base of each pin to indicate the actual width of the pins.
7. Number the pins.
8. Place the clear plastic over the original drawing and trace the pin deck outline and the circles indicating pin placement.
9. Complete the pin deck model by numbering the pins.

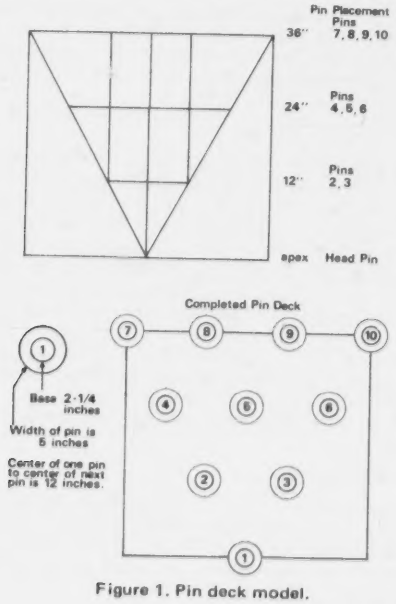

Figure 1. Pin deck model.

Bowling Norms for College Women

FRANCES WOOD
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Betty A. Wallace is an assistant professor of physical education at the University of Arkansas, Fayetteville. She obtained her B.S. degree from the University of Houston, Houston, Texas, and the M.Ed. degree from the University of Arkansas.

Bowling instructors are constantly seeking ways of measuring achievement or answering students' questions concerning the amount of improvement they can expect. Norms provide standard points of reference that may be used as a basis for judgment or comparison. The norms that have been developed here may provide each student who starts at a specific level with a realistic idea of the progress he can expect at the end of every five lines. The norms may also be used to determine skill grades in the following ways: (1) separate skill grades may be assigned after each five lines with all grades averaged at the end of the course; (2) final five-game average may be used to determine the skill grade; or (3) final five-game average may be compared with initial leve[1] of ability to ascertain amount of improvement.

We used the bowling norms established in 1950 by Phillips and Summers to measure the progress of students in women's bowling classes at the University of Arkansas.[1] These norms were developed for college women bowlers with ability averages grouped at 10-point intervals. We felt that these norms might not be fair to those students whose beginning averages fell at the bottom of the 10-point interval because they were expected to improve to the same ability level as those students who started with averages near the top of the same 10-point interval.

To reduce the distance between the upper and lower limits, norms were constructed at five-point intervals using the scores of

[1] Marjorie Phillips and Dean Summers, "Bowling Norms and Learning Curves for College Women," *Research Quarterly*, 21 (Dec. 1950), pp. 337-85.

3,620 women students in bowling classes taught by the authors over a 12-year period. The procedures used by Phillips and Summers for developing norms were followed. Information regarding procedures and treatment of data may be obtained from the authors upon request.

The average of the first 5 lines was used as the level of ability, or beginning average for each student. Norms were developed for each level of ability at the end of 10 lines, and again at the end of each succeeding 5 lines through 25 lines. The 5-point ability levels begin at scores of 50 to 54.9 and continue through scores of 125 to 129.9. The norms which were developed are presented in the following tables.

BOWLING NORMS FOR COLLEGE WOMEN

LEVEL OF ABILITY: SCORES 50 to 54.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	74 and up	100 and up	104 and up	112 and up
Good	68 – 73	89 – 99	93 – 103	98 – 111
Average	61 – 67	76 – 88	82 – 92	84 – 97
Poor	55 – 60	65 – 77	71 – 81	71 – 83
Inferior	54 or less	64 or less	70 or less	70 or less
N	43	43	43	43
* M	63.88	82.26	86.95	90.92
SD	5.39	9.95	9.20	11.86

LEVEL OF ABILITY: SCORES 55 to 59.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	77 and up	102 and up	108 and up	115 and up
Good	72 – 76	90 – 101	96 – 107	101 – 114
Average	64 – 71	77 – 89	81 – 95	85 – 100
Poor	58 – 63	65 – 76	71 – 80	71 – 84
Inferior	57 or less	64 or less	70 or less	70 or less
N	74	74	74	74
M	67.11	82.96	88.17	92.90
SD	5.76	10.52	11.24	12.49

*N = Number of participants
M = Mean
SD = Standard deviation

LEVEL OF ABILITY: SCORES 60 to 64.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	81 and up	107 and up	112 and up	120 and up
Good	75 – 80	94 – 106	98 – 111	104 – 119
Average	67 – 74	80 – 93	85 – 97	87 – 103
Poor	62 – 66	67 – 79	71 – 84	71 – 86
Inferior	61 or less	66 or less	70 or less	70 or less
N	134	134	134	134
M	70.77	86.40	91.28	94.97
SD	5.68	11.35	11.73	13.73

LEVEL OF ABILITY: SCORES 65 to 69.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	84 and up	107 and up	113 and up	120 and up
Good	79 – 83	96 – 106	101 – 112	107 – 119
Average	72 – 78	84 – 95	88 – 100	91 – 106
Poor	67 – 71	73 – 83	76 – 87	78 – 90
Inferior	66 or less	72 or less	75 or less	77 or less
N	189	189	189	189
M	75.15	89.55	94.18	98.54
SD	4.94	9.89	10.51	11.91

LEVEL OF ABILITY: SCORES 70 to 74.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	88 and up	109 and up	115 and up	120 and up
Good	83 – 87	98 – 108	103 – 114	107 – 119
Average	76 – 82	85 – 97	89 – 102	93 – 106
Poor	71 – 75	73 – 84	76 – 88	80 – 92
Inferior	70 or less	72 or less	75 or less	79 or less
N	299	299	299	299
M	79.09	90.99	95.71	99.54
SD	5.12	10.45	11.11	11.42

LEVEL OF ABILITY: SCORES 75 to 79.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	92 and up	114 and up	118 and up	124 and up
Good	87 – 91	101 – 113	106 – 117	111 – 123
Average	80 – 86	87 – 100	92 – 105	96 – 110
Poor	75 – 79	75 – 86	80 – 91	83 – 95
Inferior	74 or less	74 or less	79 or less	82 or less
N	392	392	392	392
M	83.31	94.03	98.58	103.18
SD	5.03	11.19	11.12	11.94

LEVEL OF ABILITY: SCORES 80 to 84.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	97 and up	115 and up	121 and up	127 and up
Good	91 – 96	104 – 114	109 – 120	114 – 126
Average	84 – 90	90 – 103	95 – 108	99 – 113
Poor	79 – 83	79 – 89	81 – 94	85 – 98
Inferior	78 or less	78 or less	82 or less	84 or less
N	476	476	476	476
M	87.28	96.51	101.66	105.68
SD	5.22	10.27	10.93	11.85

LEVEL OF ABILITY: SCORES 85 to 89.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	101 and up	117 and up	123 and up	127 and up
Good	95 – 100	106 – 116	111 – 122	115 – 126
Average	88 – 94	93 – 105	97 – 110	100 – 114
Poor	83 – 87	82 – 92	85 – 96	87 – 99
Inferior	82 or less	81 or less	84 or less	86 or less
N	429	429	429	429
M	91.47	99.32	103.53	106.94
SD	5.08	10.04	10.73	11.31

LEVEL OF ABILITY: SCORES 90 to 94.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	105 and up	121 and up	126 and up	130 and up
Good	100 – 104	110 – 120	113 – 125	117 – 129
Average	92 – 99	97 – 109	99 – 112	102 – 116
Poor	87 – 91	86 – 96	86 – 98	88 – 101
Inferior	86 or less	85 or less	85 or less	87 or less
N	459	459	459	459
M	95.49	102.81	105.56	108.99
SD	5.23	10.00	11.18	11.85

LEVEL OF ABILITY: SCORES 95 to 99.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	108 and up	124 and up	128 and up	135 and up
Good	103 – 107	112 – 123	116 – 127	121 – 134
Average	96 – 102	99 – 111	102 – 115	105 – 120
Poor	91 – 95	87 – 98	90 – 101	91 – 104
Inferior	90 or less	86 or less	89 or less	90 or less
N	366	366	366	366
M	99.31	105.32	108.90	112.69
SD	4.99	10.32	10.75	12.55

LEVEL OF ABILITY: SCORES 100 to 104.5

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	114 and up	130 and up	133 and up	136 and up
Good	108 – 113	117 – 129	120 – 132	123 – 135
Average	100 – 107	102 – 116	105 – 119	107 – 122
Poor	94 – 99	90 – 101	92 – 104	93 – 106
Inferior	93 or less	89 or less	91 or less	92 or less
N	256	256	256	256
M	103.31	109.29	112.44	114.73
SD	5.82	11.42	11.68	12.31

LEVEL OF ABILITY: SCORES 105 to 109.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	117 and up	130 and up	135 and up	140 and up
Good	111 – 116	118 – 129	121 – 134	125 – 139
Average	104 – 110	104 – 117	106 – 120	108 – 124
Poor	98 – 103	91 – 103	93 – 105	94 – 107
Inferior	97 or less	90 or less	92 or less	93 or less
N	200	200	200	200
M	107.05	110.38	113.34	116.22
SD	5.44	11.06	11.77	13.03

LEVEL OF ABILITY: SCORES 110 to 114.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	123 and up	135 and up	138 and up	143 and up
Good	116 – 122	122 – 134	126 – 137	129 – 142
Average	108 – 115	107 – 121	112 – 125	115 – 128
Poor	101 – 107	94 – 106	99 – 111	99 – 114
Inferior	100 or less	93 or less	98 or less	98 or less
N	132	132	132	132
M	111.69	113.98	118.27	121.19
SD	6.33	11.49	10.86	12.52

LEVEL OF ABILITY: SCORES 115 to 119.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	125 and up	135 and up	139 and up	146 and up
Good	119 – 124	124 – 134	127 – 138	132 – 145
Average	112 – 118	110 – 123	113 – 126	116 – 131
Poor	106 – 111	99 – 109	101 – 112	102 – 115
Inferior	105 or less	98 or less	100 or less	101 or less
N	85	85	85	85
M	115.43	116.49	119.65	123.64
SD	5.63	10.44	10.66	12.27

LEVEL OF ABILITY: SCORES 120 to 124.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	130 and up	140 and up	142 and up	149 and up
Good	124 – 129	129 – 139	130 – 141	133 – 148
Average	116 – 123	115 – 128	115 – 129	115 – 132
Poor	110 – 115	104 – 114	103 – 114	98 – 114
Inferior	109 or less	103 or less	102 or less	97 or less
N	53	53	53	53
M	119.83	121.99	122.30	123.65
SD	6.16	10.49	11.27	14.58

LEVEL OF ABILITY: SCORES 125 to 129.9

Rating	Lines 1 to 10	Lines 11 to 15	Lines 16 to 20	Lines 21 to 25
Superior	132 and up	148 and up	146 and up	152 and up
Good	128 – 131	133 – 147	133 – 145	135 – 151
Average	121 – 127	115 – 132	116 – 132	116 – 134
Poor	116 – 120	102 – 114	103 – 115	99 – 115
Inferior	115 or less	101 or less	102 or less	98 or less
N	33	33	33	33
M	123.63	124.26	124.13	125.29
SD	4.91	12.91	12.32	15.14

The Real Thing — on the Gym Floor!

MARIAN E. KNEER

Marian Kneer is an assistant professor of physical education at the University of Illinois, Chicago Circle. She received her B.S. and M.S. degrees from Illinois State University and her Ed.S. degree from the University of Michigan where she is completing work on her Ph.D. degree. Her previous experience was at East Peoria High School where she served as department chairman. She has bowled for many seasons in league play.

Bowling has received renewed attention as a valuable lifetime skill. It was formerly assumed that the inclusion of bowling in the school curriculum required a nearby bowling establishment or the use of synthetic equipment in the gymnasium. Several years ago, when the author was faced with this situation, it was discovered that utilization of the nearby lanes was not possible and that there were drawbacks in using artificial equipment. The problem was solved by exploring the feasibility of using official balls and pins on the gym floor. Sounds incredible, but the investigation proved positive.

The first step was to determine whether the pins or balls would damage the floor. School engineers indicated that a gymnasium floor is laid similarly to those on bowling lanes and that damage would not result. The balls can cause skid marks on the finish of the floor, but they are easily scrubbed off after the program is completed.

The second step was to consider the safety factor. It was discovered that the balls can be backstopped by rolled up wrestling mats that measure about 30 inches in height. To prevent the pins from rolling sideways to other lanes, old and new 5-foot by 10-foot tumbling mats were rolled and tied (Figure 1). The author bowled on a gym floor for several lines while observers and colleagues, serving as pinspotters, evaluated the pin action and possibility of injury from balls or pins. It was decided that little danger is involved. The pinspotters stood behind the wrestling mats at all times when the pins were upright.

The next step was to mark off the dimensions of a bowling "lane." In the author's situation, it was possible to provide regulation approach distances to the foul line, but impossible to provide sufficient length from the foul lines to the pins. Perhaps this problem is not too serious since important skills in bowling are the approach and delivery of the ball. The shorter distance may provide more security for the beginner and thus foster a willingness to approach and deliver the ball with a free swing. It is noted that with plastic equipment the same problems may exist.

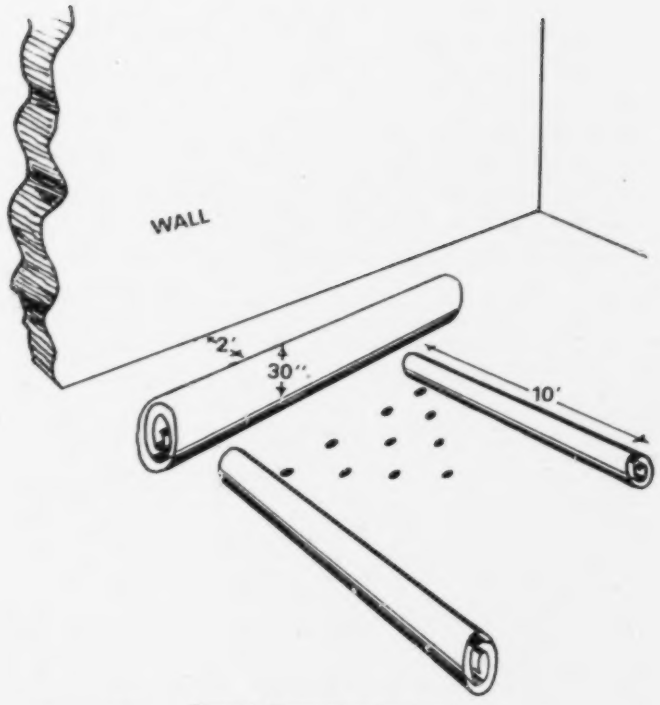


Figure 1. Gymnasium floor setup.

Equipment can be secured from local bowling lanes. Proprietors are frequently cooperative and eager to assist in such a project. In the author's situation, 10 sets of used pins and approximately 18 used balls were donated. The need for a variety of grip sizes was solved by having the balls drilled for two different sizes.

Boxes with rollers were constructed; handles were attached at the ends and sides for convenient stacking and storage (Figure 2). The boxes, which held approximately six balls, were placed between pairs of lanes.

The number of lanes that can be made depends on the size of the gym and the size of the class. Most gymnasiums can easily

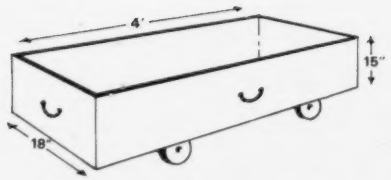


Figure 2. Box to hold six balls.

accommodate eight lanes, which may provide bowling for 40 girls. When the final floor plan of the lanes was determined, a template from poster board was made with tempera paint to mark the spots where pins are to be placed. Circles were drawn with the pin numbers written inside.

The procedure used for bowling on gymnasium lanes is to start with the anchor, the last bowler in the team lineup, in the role of pinspotter behind the wrestling mats. Her duty is to set up the pins for the leadoff bowler. After the first ball is bowled, she returns the ball slowly to the bowler and clears away the fallen pins, placing them behind the mat. The bowler is instructed to wait at the foul line for her ball to be returned and to stop the ball by placing her foot on it.

After a strike or the second ball, the leadoff bowler goes immediately to the pinspotting area to help set up all the pins. The original pinspotter carries the second ball back to the next bowler. The leadoff bowler then stands behind the mats while the second bowler rolls the ball. Students may be permitted to wear their own bowling shoes if they have them or to take off their tennis shoe on their slide foot.

The author has had experience in teaching bowling at bowling lanes as well as in the gymnasium. Bowling in the gym provides many advantages. First, the instructor can more easily give mass instructions since there are no ball returns or channels. Special pickups can be practiced for spares or splits. Also, the students tend to approach and deliver the ball more confidently when they are looking at a target a bit closer and at lanes without ominous channels.

The procedure outlined above has been used at East Peoria Community High School for several years. A 15-lesson unit is provided for all senior girls. The program has resulted in the gymnasium bowling lanes being used every hour of the school day by approximately 200 girls. During this time, no damage has been done to the floor and no student has been injured from balls or flying pins. The real thing can be done on the gymnasium floor. Try it!

COLLEGIATE DIVISION OF THE WIBC

The Collegiate Division of the Women's International Bowling Congress has been in operation on college campuses since September, 1966. In its first season, 35 leagues were sanctioned, and 1,003 WIBC memberships were issued to college women. For information about this popular program, request a Collegiate Division information packet from:

Women's International Bowling Congress
Collegiate Division
5301 South 76th Street
Greendale, Wisconsin 53129

Membership is open to all women students of colleges, universities, and junior colleges who meet their school athletic participation requirements. Membership fees are nominal. Amateur competitive status is mandatory for membership and participation in ABC or WIBC National Collegiate Division Tournaments. Its eligibility rule is reprinted below.

ELIGIBILITY AND AMATEUR STANDING RULE COLLEGIATE DIVISION OF ABC/WIBC

1. *General Eligibility–Intracollegiate Competition*
   Membership shall be available to all students who are enrolled in any institution of higher education and who meet the requirements of the institution for such participation.
2. *Specific Eligibility–Intercollegiate Competition*
   Eligibility shall be determined by the institution, conference, or sponsoring collegiate association regulations for intercollegiate athletics.
3. *National Collegiate Division Tournament Eligibility*
   To maintain amateur status for such a tournament a bowler must not–
   a. Bowl, substitute, or pace in any league or tournament or any other bowling competition where money or merchandise prizes are listed as awards. (*Note:* Individual intercollegiate athletic awards and similar momentos shall be limited to those approved and administered by the institution or its conference or sponsoring collegiate association in keeping with traditional college requirements as to what constitutes an acceptable award.)
   b. Accept personal assistance from a professional games organization or a commercial organization which clearly implies endorsement of any product.

c. Coach for money.
d. Accept pay for a radio or television appearance other than expense that might be reasonably incurred in his travel to and from the studio.
e. Compete for and/or accept scholarships awarded on bowling skills only.

4. Any violation of general playing rules that would result in suspension from the adult organization will result in loss of collegiate division membership. (*Note:* Bowlers under suspension or ineligible for WIBC and ABC membership are ineligible for membership in the Collegiate Division.)
5. All awards for leagues and tournaments sanctioned by the Collegiate Division must conform to amateur standards as established by the Collegiate Division.

National Intercollegiate Postal Tenpin Tournament

GENEIVE HINGST
Western Illinois University
Macomb, Illinois

The National Intercollegiate Postal Tenpin Tournament is in its thirtieth season, having been first inaugurated at Pennsylvania State University by the WRA Bowling Club to stimulate interest in bowling. The schools invited to join enjoyed the experience so much that a petition was submitted to the DGWS to sponsor the event, and the Legislative Board approved the tournament in 1942. Since that time the regulations and results have been published in each issue of the DGWS *Bowling-Fencing-Golf Guide*.

In January 1963, the Legislative Board changed the name from "telegraphic" to "postal" and increased the point system from 10 to 15 points. No trophies or awards are made. Schools within traveling distance are encouraged to arrange face-to-face matches.

If your institution would like to enter the tournament, simply fill out the acceptance form and mail it. Scoresheets and receipts will be mailed at once.

Regulations

Competitors: Undergraduate women students in good standing at any institution of learning are invited to compete. At least 10 women must bowl from an institution, the five high scores to count.

Date: Any institution may compete during any or all of the four periods listed below. All 10 women from one institution must bowl on the same day.

First period – December 1-20
Second period – February 1-28
Third period – March 1-31
Fourth period – April 1-30

Contest: Each institution must decide the division in which it will participate for the year. Divisions are: A–Contest consisting of two games; one practice ball before the first game only. B–Contest consisting of three games; one practice ball before the first game only.

Equipment and Play: Participants must follow specifications of the Division for Girls and Women's Sports.

Witness: All bowling must be witnessed by the faculty adviser by whom all scoresheets must be checked and signed.

Scoring: The rules set forth in the current DGWS *Bowling-Fencing Guide* will be the official rules for the tournament.

Mailing: The official scoresheet or a facsimile should be postmarked no later than midnight of the period entered to be considered in tabulations.

Fee: The Division Executive Council of the DGWS has set up a fee of two dollars per year for all postal meets sponsored by the DGWS.

Report: Within two weeks of the close of each period, the results will be tabulated and a summary will be mailed to all institutions that have filed acceptance blanks and paid the fee. Reports will be separate for each division.

Point System: Schools will compete in only one division. One point for entry; from fifteen points to one point for placing first to fifteenth in team scores (five-women two-game series or five-women three-game series); individual two-game series or three-game series; and individual single game. Points are cumulative for the year.

(Tear off here or make facsimile)

TENPIN TOURNAMENT ACCEPTANCE

If your institution accepts the above conditions, please sign and enclose the fee of two dollars with acceptance. This fee includes all four periods.

Signed_____(Faculty Adviser)

Institution_____

Address_____

_____

Send to: Mimi Ryan, Women's Gym, Univ. of Florida, Gainesville 32601

RECORDS

High Five-Women Team Score (two games)
Eastern Illinois Univ., Charleston, 1971-72 1892

High Five-Women Team Score (three games)
Pennsylvania State Univ., University Park, 1971-72 2792

High Individual Series (two games)
Elaine Callen, College of Sequoias, Visalia, Calif., 1949-50 . . . 442

High Individual Series (three games)
B. J. Hember, Univ. of Kansas, Lawrence, 1964-65 730

High Singles Game (two games)
Roberta Smock, Temple Univ., Philadelphia, Pa., 1953-54 . . . 253
Tied by Donna Fuhr, Northwest Missouri State College, Maryville, 1960-61

High Single Game (three games)
B. J. Hember, Univ. of Kansas, Lawrence, 1964-65 278

RECORDS
1970-1971

High Five-Women Team Score (two games)
Northern State College, Aberdeen, S.D. 1792

High Five-Women Team Score (three games)
Ithaca College, Ithaca, N.Y. 2705

High Individual Series (two games)
Pat Borchers, Northern State College, Aberdeen, S.D. 406

High Individual Series (three games)
Michele Block, Ithaca College, Ithaca, N.Y. 576

High Single Game (two games)
Helen Nikiel, State Univ. College, Buffalo, N.Y. 233

High Single Game (three games)
Julie Goldstein, Ithaca College, Ithaca, N.Y. 246

RECORDS
1971-1972

High Five-Women Team Score (two games)
Eastern Illinois Univ., Charleston 1892

High Five-Women Team Score (three games)
Pennsylvania State Univ., University Park 2792

High Individual Series (two games)
Nancy Knocke, Gustavus Adolphus College, St. Peter, Minn. . 403

High Individual Series (three games)
Jan Randle, Southern Illinois Univ., Carbondale 598

High Single Game (two games)
Maureen Jorgenson, Eastern Illinois Univ., Charleston 231

High Single Game (three games)
Rose Caruso, D'Youville College, Buffalo, N.Y. 230

Final Summary Sheet – 1970-71

NATIONAL INTERCOLLEGIATE POSTAL AMERICAN TENPIN TOURNAMENT

Division A

School	Periods 1st	2nd	3rd	4th	Total
Northern State College, Aberdeen, S.D.	21.5	81.0	120.5	80.0	303.0
Eastern Illinois Univ., Charleston	82.0	62.0	60.5	81.0	285.5
South Dakota State Univ., Brookings	7.0	41.5	42.5	84.5	175.5
Mansfield State College, Mansfield, Pa.	37.5	33.0	12.5	11.5	94.5
State Univ. College-Fredonia, Fredonia, N.Y.	4.0	60.5	T L	19.5	84.0
Southeast Missouri State College, Cape Girardeau	40.5	13.5	—	23.0	77.0
State Univ. College-Buffalo, Buffalo, N.Y.	37.0	22.5	9.0	—	68.5
Denison Univ., Granville, Ohio	—	7.0	36.0	12.5	55.5
Mississippi State College for Women, Columbus	29.0	T L	T L	25.5	54.5
Morton College, Cicero, Ill.	—	5.0	41.0	7.0	53.0
Wells College, Aurora, N.Y.	19.0	18.0	7.0	—	44.0
Texas Tech. Univ., Lubbock	35.0	—	—	—	35.0
Univ. of Evansville, Evansville, Ind.	14.5	6.0	6.0	6.0	32.5
Hood College, Frederick, Md.	18.5	4.0	—	—	22.5
Franklin College, Franklin, Ind.	—	—	10.0	—	10.0
Beloit College, Beloit, Wis.	6.5	3.0	—	—	9.5
Georgian Court College, Lakewood, N.J.	5.0	—	—	—	5.0
McKendree College, Lebanon, Ill.	—	—	—	5.0	5.0
Kaskaskia College, Centralia, Ill.	3.0	—	—	—	3.0
Henry Ford Community College, Dearborn, Mich.	—	—	—	—	—
Univ. of Tennessee, Martin	0.0	—	—	—	0.0
Drake Univ., Des Moines, Iowa	—	—	—	—	—
Briarcliff College, Briarcliff Manor, N.Y.	0.0	—	T L	—	0.0

Division B

School	Periods 1st	2nd	3rd	4th	Total
Ithaca College, Ithaca, N.Y.	45.0	79.0	57.0	68.5	249.5
Wisconsin State Univ., LaCrosse	74.0	43.5	25.0	37.5	180.0
Wisconsin State Univ., Oshkosh	70.5	14.0	46.0	42.0	172.5
Univ. of Iowa, Iowa City	6.0	37.5	86.0	16.0	145.5
Indiana State Univ., Terre Haute	55.5	22.5	25.0	15.5	118.5
Morehead State Univ., Morehead, Ky.	—	64.0	T L	42.0	106.0
Western Illinois Univ., Macomb	—	22.5	—	64.0	86.5
Parsons College, Fairfield, Iowa	45.0	3.0	6.0	31.5	85.5
St. Olaf College, Northfield, Minn.	—	11.0	39.0	20.0	70.0
Western Michigan Univ., Kalamazoo	18.5	T L	35.0	—	53.5
Univ. of Minnesota, Minneapolis	—	41.5	—	—	41.5
Southern Illinois Univ., Carbondale	—	12.0	29.0	—	41.0
Capital Univ., Columbus, Ohio	7.0	10.5	7.0	T L	24.5
Univ. of Cincinnati, Cincinnati, Ohio	15.0	6.5	—	—	21.5
Central Connecticut State College, New Britain	8.0	5.0	—	—	13.0
Northwest Missouri State College, Maryville	—	1.0	5.0	INC	6.0
Chadron State College, Chadron, Neb.	—	—	—	6.0	6.0
Los Angeles Harbor College, Wilmington, Calif.	5.0	T L	—	—	5.0

Final Summary Sheet
Division A 1971-72

School	Periods 1st	2nd	3rd	4th	Total
Wells College, Aurora, N.Y.	97.50	64.00	64.00	64.50	290.00
Eastern Illinois Univ., Charleston	57.00	120.50	56.00	T L	235.50
South Dakota State Univ., Brookings	59.00	31.00	50.00	85.50	225.50
Northern State College, Aberdeen, S.D.	9.50	37.00	39.00	80.50	166.00
Iowa Wesleyan College, Mt. Pleasant	45.50	39.00	5.00	20.00	109.50
Southeast Missouri State College, Cape Girardeau	6.00	9.00	18.00	47.00	80.00
Gustavus Adolphus College, St. Peter, Minn.	12.50	T L	64.00	—	76.50
Denison Univ., Granville, Ohio	32.50	16.00	7.00	6.00	61.50
Univ. of Evansville, Evansville, Ind.	13.00	5.00	31.00	9.00	58.00
Mansfield State College, Mansfield, Pa.	8.50	3.00	10.00	17.50	39.00
State Univ. College-Fredonia, Fredonia, N.Y.	8.00	14.00	—	—	22.00
Mississippi State College for Women, Columbus	0.00	8.50	4.00	8.00	20.50
West Virginia Wesleyan College, Buckhannon	1.00	4.00	—	7.00	12.00
State Univ. College-Buffalo, Buffalo, N.Y.	0.00	6.00	6.00	T L	12.00
Illinois Wesleyan Univ., Bloomington	2.00	2.00	3.00	—	7.00
Morton College, Cicero, Ill.	7.00	—	—	—	7.00
Towson State College, Baltimore, Md.	3.00	—	—	—	3.00
Hood College, Frederick, Md.	0.00	1.00	—	—	1.00
Texas Southmost College, Brownsville	—	T L	—	—	—

Division B

School	Periods 1st	2nd	3rd	4th	Total
St. Cloud State College, St. Cloud, Minn.	43.500	62.00	—	97.00	202.500
San Diego Mesa College, San Diego, Calif.	53.000	30.00	—	66.50	145.500
Pennsylvania State Univ., University Park	139.333	—	—	—	139.333
Wisconsin State Univ., Whitewater	—	53.50	75.00	10.00	138.500
Morehead State Univ., Morehead, Ky.	—	44.50	—	62.00	106.500
Southern Illinois Univ., Carbondale	20.833	T L	51.50	12.50	84.833
St. Olaf College, Northfield, Minn.	—	—	66.00	T L	66.000
Western Illinois Univ., Macomb	18.000	47.00	—	—	65.000
Wisconsin State Univ.-Oshkosh, Oshkosh	13.000	3.00	34.50	14.00	64.000
D'Youville College, Buffalo, N.Y.	6.000	5.00	—	50.00	61.000
Parsons College, Fairfield, Iowa	17.500	7.00	28.00	8.00	60.500
Ithaca College, Ithaca, N.Y.	17.500	28.00	10.00	INC	55.500
Northwest Missouri State College, Maryville	5.000	31.00	5.50	5.50	46.500
Indiana State Univ., Terre Haute	11.333	6.50	28.00	—	45.833
Capital Univ., Columbus, Ohio	8.000	20.50	9.00	7.00	44.500
Chadron State College, Chadron, Neb.	INC	0.00	24.00	—	24.000
Univ. of Iowa, Iowa City	4.000	—	9.00	10.00	23.000
Marshall Univ., Huntington, W. Va.	—	—	—	14.00	14.000
Montana State Univ., Bozeman	3.00	2.00	—	—	5.000
Glassboro State College, Glassboro, N.J.	—	4.00	—	—	4.000

OFFICIAL DUCKPIN RULES*

TEAM MEMBERSHIP

1. In a five-man team league, a legal team shall consist of five bowlers, four bowlers, and one dummy or three bowlers and two dummies. In a four-man team league two dummies shall be allowed per team. In a three-man team league only one dummy shall be allowed per team. In a two-man team, or doubles league, one dummy may be allowed, at the option of the league only. (NOTE – The members of the team may be REGULAR members of that team, ALTERNATE members of that team or ALTERNATE MEMBERS PROVIDED BY THE LEAGUE. An alternate bowler is a person bowling in the place of a regular team member. A substitute bowler is a person finishing a game that has already been started by a regular or alternate bowler. A dummy shall be considered as a regular member of the team but not as a bowler. Any and all bowlers who are eligible to bowl with a team at any time are eligible bowlers of that team and any, or all, such bowlers may be used to constitute an eligible team.)

In a non-handicap mixed league where a male member of the team is absent, or is withdrawn from the line-up, he must be replaced with another male bowler or with a male dummy score. Likewise, if a female member of the team is absent, or is withdrawn from the line-up, she must be replaced with another female bowler or with a female dummy score. (NOTE – In handicap mixed leagues the use of male replacements for female bowlers or female replacements for male bowlers is allowed with the difference created in the handicap automatically taking care of such changes.)

In a non-handicap "limited average" mixed league a male bowler may replace a female bowler and a female may replace a male bowler.

PLAYER SUBSTITUTION

2. The captain of any team may withdraw any player, or dummy, in any game and substitute any eligible player, or a dummy, at any time, but the player withdrawn shall not be eligible to again roll in the game from which he was withdrawn. The score shall be credited to the bowler beginning the game or completing a game started with a dummy or blind.

If a player withdraws and no substitution is made, the player's score for the game is the total of his actual score plus the dummy score of the league for each of the remaining frames of the game.

*Excerpts from rules reprinted with permission of National Duckpin Bowling Congress.

No recognition for any awards by the National Duckpin Bowling Congress can be given for any individual score in which a substitute (meaning a bowler substituting for another bowler who has already started the game) is involved.

DUMMY SCORE AS PINFALL

6. The dummy score, as regularly established by league rule, shall count as pinfall in every instance for the team being obliged to use such dummy score, and also for league awards if the league so determines.

PLAYING LANES

7. The lanes immediately adjoining each other shall be used in all games. The contesting teams shall successively and in regular order roll one frame on one lane, and for the next frame alternate and use the other lane, so alternating each frame until the game is completed. The teams must start the following game on the same lanes on which the tenth frame of the previous game was rolled.

Except that, at the option of a league, two frames may be rolled consecutively on one lane by each bowler on the team before alternating lanes. Where this procedure is followed the teams will start each succeeding game on the opposite lane from which the tenth frame of the previous game was rolled.

This exception shall apply to leagues only, and then only at the option of the league.

The captain of the visiting team shall be allowed choice of the lanes.

MACHINE BREAKDOWN

8. When one machine on a pair of lanes using automatic pinsetting machines "breaks down" during a league match or in any tournament and another pair of lanes is not available for use, then the bowlers "SHALL" continue rolling on one lane until the "broken down" machine is again in operation, at which time the bowlers shall resume bowling according to normal, regular procedure. During the period that the bowlers are bowling on one lane, the bowlers shall alternate in proper order as if bowling on two lanes, i.e., the leadoff bowler on one team being followed by the leadoff bowler on the other team, then the second bowler on the one team, followed by the second bowler on the other team, etc.

If a machine breakdown occurs during a league match or in any tournament necessitating moving the bowlers to another pair of lanes, the bowlers will change lanes and continue the game in the frame then being rolled, and shall remain on these lanes until the

completion of their scheduled match, unless there is a breakdown on these lanes.

This rule may be enforced to cover any number of breakdowns.

BOWLING PROCEDURE

9. The games shall consist of ten frames on each side. Three balls shall be allowed in each frame, to be rolled one at a time. All strikes and spares made in the tenth frame or any extra frame, shall be rolled off before leaving the lane, and on the same lane made. A strike or spare made on the roll-off of one made in tenth frame shall not be included in totals for season.

No pins shall be conceded. All pinfall to be accredited to a bowler must have been knocked down because of and by action of a legally delivered ball.

No game can be started until the preceding game is finished; i.e. the leadoff bowler shall not start the succeeding game until the anchor man of the opposing team has completed rolling the preceding game.

WHO SHALL ROLL FIRST

10. Bowlers should bowl as soon as the pins have been set up on their lanes. In the event of a controversy as to who shall bowl first in the last box of a game the bowler on the right shall bowl first, completing the box.

STARTING TIME FOR LEAGUE PLAY

11. Play shall begin at the starting time fixed by the league (this means the exact starting time – no grace period allowed). Should only three or four players be ready at that time, the team shall start with the players that are present and should the other players appear AT ANY TIME during the game, they may be added and begin play in the frame then being rolled by the team. Dummy scores, as fixed by the league, are to be used for all prior frames for such tardy players. No bowler will be allowed to catch up any frame that has been missed.

If there is not a legal team present at the starting time fixed by the rules of the league, the game or games shall be declared forfeited. All games must be rolled by the team claiming the forfeit. Forfeits cannot be claimed the first 4 weeks of a league schedule when a league has an odd number of teams and organizational work is being done to round out the league; postponements or make-up matches must be allowed in this case. A team can forfeit only one game at a time.

Those players who are present at the start of the game may roll for their individual average and score but the opposing team must

play its legal team. The scores of the players rolling for their individual averages shall NOT count as pinfall for the forfeiting team, and the forfeiting team shall not be credited with dummy scores as pinfall for those bowlers who are absent.

TIE GAME

14. In the event of a tie game, first or second game, each bowler will use for the roll-off the first frame of the succeeding game, and the highest total pinfall for the first frame of the succeeding game shall decide the winner of the previous tie game, and in the event that the total of the first frame for each team ends in a tie, bowlers will continue in the same manner for the next frame, and so on until the tie is broken. However, should the tie occur in the final game the teams shall change lanes for the next frame, and if the tie remains unbroken, teams shall continue to alternate lanes until the tie is broken.

In case of a tie game where a dummy is being used, the team using the dummy shall be allowed one-tenth of the dummy score for each succeeding box after the tenth until the tie shall be broken, fractions of over one-half to count as one pin, fractions of one-half and under not to count.

Pinfall in any frame after the tenth, to determine the winner of a tie game, shall not count as pinfall in the records.

Failure of team members to remain on the lanes until the totals of the two competing teams are computed shall, in a tie game, require such teams to bowl the extra boxes needed to break the tie with only those members then present. In such instances the scores of those competing, plus the regular dummy score of the league for the absent player or players, shall be used. If either team fails to have a legal number of bowlers (3 bowlers and 2 dummies, 4 bowlers and 1 dummy or 5 bowlers) remaining, the team that does have such legal number of bowlers remaining shall be declared as the winner of the tie game by forfeit.

TEAMS BOWLING ALONE

17. When any game is declared forfeited under the rules, the team present and not at fault must bowl any and all games to be bowled as though they were actually contested and the scores and averages shall be credited and recorded.

Any team which rolls a league match, not scheduled against another team, or where the opposing team does not appear, unless postponement has previously been arranged for, shall receive credit for three games won by forfeit. (A team cannot lose a forfeit match.)

Such forfeits shall mean a win of three games, or four points, whichever scoring system is being used by the league. No team shall roll against any previously determined scores and/or team averages.

FINAL POSITIONS OF TEAMS IN LEAGUE STANDING

18. Where teams are tied in the number of games won and lost, whether in the first or second half of a split schedule, or in a full season's schedule, the final positions of such teams in the league standings shall be determined by total pinfall, EXCEPT, where there is a specific league rule to the contrary, then the league rule shall apply.

FOUL LINE JUDGE

19. In all events or league games under the jurisdiction of the Congress an official foul line judge or an approved automatic foul detecting device shall be used.

In the event an automatic foul detecting device fails to operate properly the opposing team Captains shall be responsible for calling all fouls until the device has been satisfactorily repaired and operating.

The foul line judge shall take special care to declare all fouls immediately upon their being committed, unasked, and in a distinct, audible voice. The foul line judge's decision as to fouls shall be final. No appeal shall be allowed from the decision of the foul line judge except where it is apparent that a foul may have been called on the wrong player. Any player who shall continue to dispute the decisions of a foul line judge may be suspended from further participation in the match in question by the foul line judge.

CHANGING FOUL LINE JUDGE

20. No foul line judge shall be changed during a league game, or an advertised match game, without the consent of a majority of the team captains involved.

FOULS

21. A foul is committed when any part of the bowler's person or clothing encroaches upon or goes beyond the foul line and touches any part of any lane equipment or any part of the building which is beyond the foul line during or after the act of delivery, whether or not the ball is released. A ball is in play and a foul may be called after a delivery has been made and until the same, or another, player is on the approach in position to make a succeeding delivery.

If, in the act of delivering the ball any object falls from the bowler's clothing or person and breaks the light beam so as to

register a foul, a foul shall be called and so recorded. However, if any such object falls onto the lane beyond the foul line and the light beam is not broken, no foul shall be called.

No balls or pins will be allowed in the gutter or on the lane before rolling. Any ball delivered before deadwood is removed or while pins or balls are in the gutter or on the lane shall be deemed a foul and handled accordingly.

No appeal shall be allowed when an approved automatic foul detecting device registers a foul except when it can be proven that the device was not operating properly. (NOTE – A player may at any time cross over the foul line for the purpose of removing an obstruction from the lane, etc., upon notification to the foul line judge, opposing team captain or member of the opposing team or tournament official of his desire to do so.)

All fouls shall be handled in accordance with the following rules: When a foul occurs on the first ball, all pins shall be respotted, that ball and the pins knocked down by that ball are lost and the bowler has two balls remaining in that box. When a foul occurs on the second ball, pins knocked down, if any, shall be counted as knocked down by the third ball, the second ball is lost and the bowler is through for that box, i.e., if the bowler spared on the second ball and fouled, it is an automatic 10 box and the bowler is through for the box. When a foul occurs on the third ball, both the ball and the pins knocked down by that ball are lost and the bowler is through for that box.

Should a bowler make a strike in the 10th box or any extra box and foul on the first roll-off ball, that ball shall be lost, the pins knocked down by that ball counted as though knocked down by the second roll-off ball, and the bowler is through for that box. Should a foul occur on the second roll-off ball, both the ball and the pins knocked down by that ball are lost.

Should a bowler make a spare in the 10th box or any extra box and foul on the roll-off ball, both the ball and the pins knocked down by that ball shall be lost.

APPARENT AND VISIBLE FOUL

22. If a player commits a foul which is apparent to a tournament official, or to an official scorer, or to both captains, or to one or more members of each of the opposing teams competing in a league or tournament contest on the same pair of lanes where the foul is committed and the foul judge through negligence fails to see it committed or the automatic foul detecting device fails to record it, a foul shall nevertheless be declared and so recorded.

DELIBERATE FOUL

23. If it is apparent that a player deliberately fouls, to benefit by the calling of such foul, he shall be immediately disqualified from further participation in the match or event then in play.

Where an automatic pinsetting machine is in use and it is apparent that a bowler deliberately steps on or pushes the pedal or button that actuates the deadwood removal mechanism of the machine to benefit by such action, then the act of the bowler shall be considered as a deliberate foul, recorded as such and bearing the same penalty as outlined in the foregoing paragraph.

In league play any eligible substitute may immediately replace such disqualified bowler, beginning with the box following the one in which the bowler was disqualified, and shall be allowed only the pins knocked down prior to and including the box and delivery of the ball on which the apparent deliberate foul was made.

(NOTE – The above foul rules shall be used for both manual and automatic machine pinsetting.)

RESPOTTING PINS

24. Should any ball delivered leave the lane BEFORE reaching the pins, it shall be declared a "gutter ball" and the pins, if any, knocked down by such ball shall not count and MUST be respotted, and/or should any ball rebound from the back cushions, the pins, if any, knocked down by such ball shall not count, but MUST be respotted, all such balls to count as balls rolled. Pins knocked down by a pin, or pins, coming out of the pit after the delivery of a "gutter ball" shall not count, but MUST be respotted.

Pins knocked down by a pin or pins rebounding from the side boards or back cushions shall count as pins down.

After a fairly delivered ball makes contact with the pins, it cannot thereafter be called a "gutter ball" and all pins knocked down after this contact shall count as pins down, except as outlined above.

Pins knocked down by a pin or pins coming in contact with the pin-boy shall count as pins down, except should the pin-boy deliberately throw a pin or pins on the lane, then the pins knocked down by such action must be respotted. Pins which are knocked down or displaced by any cause, except by a fairly delivered ball, shall in all cases be respotted, except as outlined above.

When an automatic pinsetting machine is activated by inadvertently pushing the wrong button or pedal, all pins then standing shall be respotted and play shall be resumed with no penalty whatsoever.

When a flying pin, or pins, hit the pin table of an automatic pinsetting machine and dislodges a pin, or pins, from the pin table,

any pin, or pins, then standing on the pin deck that may be knocked down by such dislodged pin, or pins, shall be counted as pins down.

DEADWOOD

25. The deadwood must be removed from the lane and gutters after each ball is rolled, mechanically where automatic pinsetting machines are in use. Should any pins fall in removing the deadwood, such pins must be respotted.

When an automatic pinsetting machine is in use and the Number 7 pin and/or the Number 10 pin is knocked down by pins being cleared by the gutter belt such pin and/or pins shall be regarded as down.

Any pin or pins knocked down by the Number 7 pin and/or Number 10 pin shall count as pins down.

Any pin or pins knocked down by a pin or pins, or falling AFTER the bowler steps on or pushes the pedal or button that actuates the deadwood removal mechanism of an automatic pinsetting machine shall not count as pins down, and any pin or pins knocked down or falling after such action on the part of the bowler shall be respotted. Any pin or pins knocked down by the action of the deadwood removal mechanism of the machine shall not count as pins down and shall be respotted. Any pin or pins knocked down or falling AFTER the bowler steps on or pushes the pedal or button that actuates the re-set mechanism of the machine shall not count as pins down.

PIN SPOTTERS STICKING

26. If the pin spotters stick in manual pinsetting, whether on the first, second or third ball, all pins must be respotted and player must re-roll frame.

INTERFERENCE, WRONG LANE, ETC.

27. If any player rolls on the wrong lane or rolls out of turn, or is interfered with by a spectator or otherwise, or if any of the pins he is playing at are knocked down or disturbed in any way before his ball reaches them, or if his ball, after being fairly bowled should come in contact with any obstacle on the lane before reaching the pins, or if he bowled before all the pins were set up, the ball shall immediately be declared "dead" and the player shall roll again, after replacing the pins as they were before such ball was rolled.

However, if one or more bowlers on the other of the two lanes being used also rolls on the wrong lane, then no corrective action shall be taken and the game shall continue as though the lanes actually used were the proper lanes.

RETURNING PIN STANDING UP

28. Should a pin leave the lane, return, and stand up on the lane or should a pin be knocked down and stand up again without leaving the lane, the same shall be declared as not down and the player must roll again at the pin, unless it should be on the third ball.

Provided, however, if a pin returns and stands up on any part of the lane outside of the area covered by the pin deck it shall be counted as a pin down.

PROTESTS

31. All protests as to interpretation of playing rules must be made to the captain of the opposing team, or to an official in charge of an event, whichever the case may be, before the bowler in question comes up to bowl the next ball, or in the case of the last box of a game, immediately after it shall have been bowled. Should the player, or players, be allowed to roll the next ball in regular order before the protest is made, no protest shall be given consideration. The foregoing paragraph shall not, however, prevent the filing of a protest as to the use of ineligible players, violation of a league or tournament rule, etc., or for any violation not immediately apparent as provided for in the foregoing paragraph.

When a legitimate protest of a game or match is made by a team, it must be presented to the governing body of the league, or the team captains, as a whole, if there be no governing body.

If the protest is proved valid, the governing body of the league, or the team Captains as a whole, shall rule and their decision will be final, EXCEPT, where the protest pertains to the use of an ineligible bowler, in which case, the appropriate rule covering the use of an ineligible bowler shall govern.

OFFICIAL SCORER

32. In all sanctioned events or league games there shall be an official scorer, whose duty it shall be to keep a correct record of the game and at the conclusion thereof sign his or her name to the same. The captain of each team shall also sign the score sheet. It is the responsibility of each team Captain to observe that the addition of the scores during, and at the end of, a game, or games, is correct.

Official scorers and league statisticians must correct all mathematical errors discovered at any time, i.e.: individual game totals added incorrectly, wrong handicap used, handicap figured wrongly, etc.

It shall be the responsibility of the league secretary and/or league statistician or official scorer to verify the averages of all bowlers of the league throughout the season. If a bowler's average is found to

put the team over team average limit of the league the secretary and/or league statistician and/or official scorer shall immediately notify the Captain of the team involved. In traveling leagues the management of the establishment involved shall also be notified.

When the correction of a mathematical error by the official scorer or league statistician creates a tie game, such tie game shall be decided prior to the next regularly scheduled league match after the correction is made in accordance with the tie game rule regularly used in that league.

SCORING THE DUCKPIN GAME*

A game consists of 10 frames or boxes. Not more than three balls are allowed for each frame or box.

If all pins are knocked down by first ball it is called a strike. A strike is marked by an X.

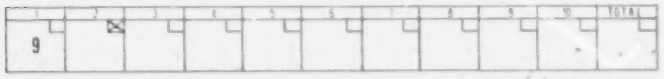
If some pins remain standing after first ball has been thrown and are all knocked down with the second ball, it is called a spare. A spare is marked thus \ .

After making a strike you are allowed 10 pins in that box plus pins made with next two balls.

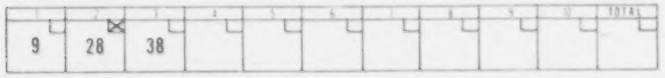
After making a spare you are allowed 10 pins in that box plus pins made with next ball.

If pins remain standing after first and second balls have been thrown, third ball is rolled and you are allowed exact number of pins knocked down by three balls. This is called a flat frame or box.

Suppose in first box you get nine pins with three balls and in second box you get a strike, score sheet will be marked thus:



Counting 10 pins for the strike in the second box, you now have a total of 19 pins. However, no figure is written into second box yet because in addition to the 10 pins for the strike, you are allowed all pins knocked down with the next two balls. On next ball after strike, first ball in the third box, you knock down 5 pins and on second ball you knock down 4 pins. This gives you a total of 19 pins for second box, plus 9 you have in first box, and total to be marked down in the second box is 28. On third ball you get the remaining pin for a total of 10 in third box. Scoresheet will be marked thus:



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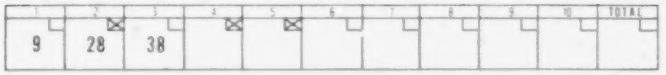
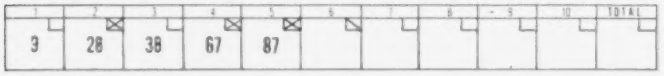
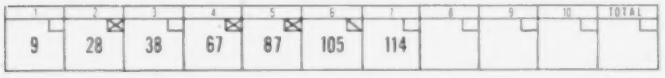
In fourth box you make a strike, and also in fifth box. Scoresheet will be marked thus:



Remember, to 10 pins for strike in fourth box you add all pins knocked down by next two balls. On first ball, after strike in fourth box, you made strike in fifth box which gives you 10 additional pins, and on the second ball after strike in the fourth box, which is now first ball in sixth box, you knock down 9 pins. You now complete fourth box score which is 29 pins for that box – 10 pins for original strike, 10 pins for first ball after strike (in the fifth box) and 9 pins for second ball after strike (first ball in the sixth box) making completed fourth box score 67. For your fifth box score you have already rolled one ball after making that strike (first ball in sixth box) knocking down 9 pins. You now roll the second ball of sixth box getting remaining pin for a spare. That gives you 10 pins to be added to original 10 pins for fifth box strike, a total of 20 pins for fifth box. Scoresheet will be marked thus:



In the seventh box you get 8 pins on first ball. This, added to 10 pins for spare in sixth box, gives you a total of 18 pins for this box, making total for sixth box 105. On second ball you do not hit any pins but get one pin with third ball for a total of 9 pins in box. Scoresheet will be marked thus:



In eighth box you get 7 pins with all three balls and in ninth box you get all pins with two balls for a spare. Scoresheet will be marked thus:

In the tenth box you make a strike. As you made a spare in the ninth box you add these 10 pins made on strike to the 10 pins for spare and ninth box score is 141. Your tenth box strike entitles you to two additional balls – to be rolled at once – (a spare in the tenth box entitles you to one additional ball). With these two balls you get a total of 9 pins. These are added to 10 pins made on strike and final score of game will be marked thus:

1	2	3	4	5	6	7	8	9	10	TOTAL
9	28	38	67	87	105	114	121	141	160	160

TENPIN RULES AND REGULATIONS*

SCORING THE GAME

Rule 1. a. A game of American Tenpins shall consist of ten frames. Each player shall bowl two balls in each of the first nine frames except when she shall make a strike. A player who scores a strike or spare in the tenth frame shall deliver three balls.

b. A ball is legally delivered when it leaves the bowler's possession and crosses the foul line into playing territory. A bowling ball must be delivered entirely by manual means and shall not incorporate any device either in the ball or affixed to it which is either detached at time of delivery or is a moving part in the ball during delivery except that any person who has had her hand or major portion thereof amputated may use special equipment to aid in grasping and delivering the ball providing the special equipment is in lieu of the amputee's hand.

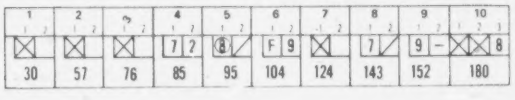
c. Where an artificial or medical aid is necessary for grasping and delivering the ball because of any other disability of the hand or arm, permission to use the aid in sanctioned competition may be granted by the WIBC under the following conditions:

1. The aid does not incorporate a mechanical device with moving parts which would impart a force or impetus to the ball.
2. A description or drawing and model of the aid is furnished WIBC.
3. A doctor's certificate describing the disability together with his recommendation that the aid should be used is furnished WIBC.

If permission is not granted, the claimant shall have the right of appeal to the WIBC Legal Committee.

Should permission be granted for the use of an artificial or medical aid, a special identification card (not a WIBC membership card) will be issued the applicant indicating that the aid may be used in sanctioned competition providing the bowler has a current membership card and the use of the aid is specifically authorized by the league or tournament management.

Permission to use the device may be withdrawn for cause.



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STRIKE

Rule 2. A strike is recorded when the player completes a legal delivery and bowls down the full setup of ten pins on the first ball. It is designated by an (x) in the small square in the upper right-hand corner of the frame in which the complete set of ten pins is bowled down with the first ball. The count in each frame where a strike is bowled shall be left open until the player has completed two more deliveries. The maximum count on one strike when followed by a spare is 20.

DOUBLE

Rule 3. When a player bowls two strikes in succession legally delivered, she shall have scored a double. The count in the frame where the first strike was bowled shall be left open until the player has completed her next delivery. When all pins are downed twice in succession, the count for the first strike is 20 plus the number of pins knocked down with the first ball of the third frame following. The maximum count on a double figuring a nine pin count on the first ball following the second strike is 29.

TRIPLE OR TURKEY

Rule 4. In scoring three successive strikes, the player shall be credited with 30 pins in the frame in which the first strike was bowled. Thus, in a game of ten full frames, a player must bowl 12 strikes in succession in order to bowl a game of 300.

SPARE

Rule 5. Any player who bowls down the remaining pins with a legally delivered second ball in any frame has scored a spare. A spare is designated by a (/) in the small square in the upper right-hand corner of the frame in which it is made. The number of pins knocked down after the first delivery before the player bowls for the spare should be marked by a small figure in the upper right corner of the frame. The count in such frame proper is left open until the player shall have bowled her first ball in the next frame following, when the number of pins knocked down by the first ball shall be added to the ten pins represented by her spare, and the total shall be credited therein. When a spare is scored in the tenth frame, a third ball shall be bowled in that frame.

ERROR

Rule 6. A player shall have made an error when she fails to bowl down all ten pins after having completed two deliveries in a given

frame provided the pins left standing after the first ball is bowled do not constitute a split. An error is designated by a (–) in the small square in the upper right-hand corner of the frame in which the error is made. The number of pins knocked down after the first delivery, before the player bowls at the remaining pins, should be marked in the upper right corner of the frame. The count in every frame where an error is committed shall be recorded immediately following the player's second delivery.

SPLIT

Rule 7. A split shall be a setup of pins remaining standing after the first ball has been legally delivered provided the headpin is down, and

(1) At least one pin is down between two or more pins which remain standing, as for example: 7-9, or 3-10.

(2) At least one pin is down immediately ahead of two or more pins which remain standing, as for example: 5-6.

A split is designated by a (O) in the small square in the upper right-hand corner of the frame in which the split occurs. The number of pins knocked down on the first delivery should be marked in the upper right-hand corner before the second ball is rolled.

PINFALL – LEGAL

Rule 8. Every ball delivered by the player shall count, unless declared a dead ball. Pins must then be respotted after the cause for declaring such dead ball has been removed.

(1) Pins which are knocked down by another pin or pins rebounding in play from the side partition, rear cushion, or sweep bar when it is at rest on the pin deck prior to sweeping dead wood are counted as pins down.

(2) If, when rolling at a full setup or in order to make a spare, it is discovered immediately after the ball has been delivered that one or more pins are improperly set, although not missing, the ball and resulting pinfall shall be counted. It is each player's responsibility to determine if the setup is correct. She shall insist that any pins incorrectly set be respotted before delivering her ball, otherwise she implies that the setup is satisfactory. No change in the position of any pins which are left standing can be made after a previous delivery in order to make a spare, unless the pin setter has moved or misplaced any pin after the previous delivery and prior to the bowling of the next ball.

(3) Pins which are knocked down by a fair ball, and remain lying on the lane or in the gutters, or which lean so as to touch kickbacks or side partitions, are termed dead wood and counted as pins down, and must be removed before the next ball is bowled.

PINFALL – ILLEGAL

Rule 9. When any of the following incidents occur the ball counts as a ball rolled, but pins knocked down shall not count:

(1) When pins are knocked down or displaced by a ball which leaves the lane before reaching the pins.
(2) When a ball rebounds from the rear cushion.
(3) When pins come in contact with the body, arms or legs of a human pin setter and rebound.
(4) A standing pin which falls when it is touched by mechanical pinsetting equipment, or when dead wood is removed, or is knocked down by a human pinsetter, shall not count and must be replaced on the pin spot inscribed on the pin deck where it originally stood before delivery of the ball.
(5) Pins which are bowled off the lane, rebound and remain standing on the lane must be counted as pins standing.
(6) If in delivering the ball a foul is committed, any pins knocked down by such delivery shall not be counted.

DEAD BALL

Rule 10. A ball shall be declared dead if any of the following occur, in which case such ball shall not count. The pins must be respotted after the cause for declaring such dead ball has been removed and player shall be required to rebowl.

(a) If, after the player delivers her ball and attention is immediately called to the fact that one or more pins were missing from the setup.
(b) When a human pin setter removes or interferes with any pin or pins before they stop rolling or before the ball reaches the pins.
(c) When a player bowls on the wrong lane or out of turn.
(d) When a player is interfered with by a pin setter, another bowler, spectator, or moving object as the ball is being delivered and before delivery is completed, player must then and there accept the resulting pinfall or demand that pins be respotted.
(e) When any pins at which she is bowling are moved or knocked down in any manner, as the player is delivering the ball and before the ball reaches the pins.
(f) When a player's ball comes in contact with any foreign obstacle.

NO PINS MAY BE CONCEDED

Rule 11. No pins may be conceded and only those actually knocked down or moved entirely off the playing surface of the lane as a result

of the legal delivery of the ball by the player may be counted. Every frame must be completed at the time the player is bowling in her regular order.

REPLACEMENT OF PINS

Rule 12. Should a pin be broken or otherwise badly damaged during the game, it shall be replaced at once by another as nearly uniform in weight and condition as possible with the set in use. The league or tournament officials shall in all cases be the judges in the matter of replacement of such pins.

A broken pin does not change the score made by a bowler. The number of pins knocked down are counted, after which the broken pin is replaced.

BOWLING ON WRONG LANE

Rule 13. When only one player or the lead-off on both teams bowl on the wrong lane and the error is discovered before another player has bowled, a dead ball shall be declared and the player(s) required to rebowl on the correct lane(s).

When more than one player on the same team has bowled on the wrong lane, the game shall be completed without adjustment and the next game shall be started on the correctly scheduled lane.

In singles match play competition, where a player normally bowls two frames each time it is her turn to bowl, and a player bowls on the wrong lane for these two frames, a dead ball shall be declared and the player required to rebowl both frames on the correct lanes providing the error is discovered prior to the time the opposing player has made a legal delivery. If the error is not discovered until the opposing player has bowled, the score shall count and the player shall be required to bowl her subsequent frames on the correct lanes.

BALLS – PRIVATE OWNERSHIP

Rule 14. Bowling balls used in the game and marked by their owners are considered private and other participants in the game are prohibited from using the same, unless the owner consents to such use.

> Note: A bowling ball shall not be more than 16 pounds in weight after drilling.

FOUL – DEFINITION OF

Rule 15. A foul is committed, with no pinfall being credited to the player although the ball counts as a ball rolled, when a part of the

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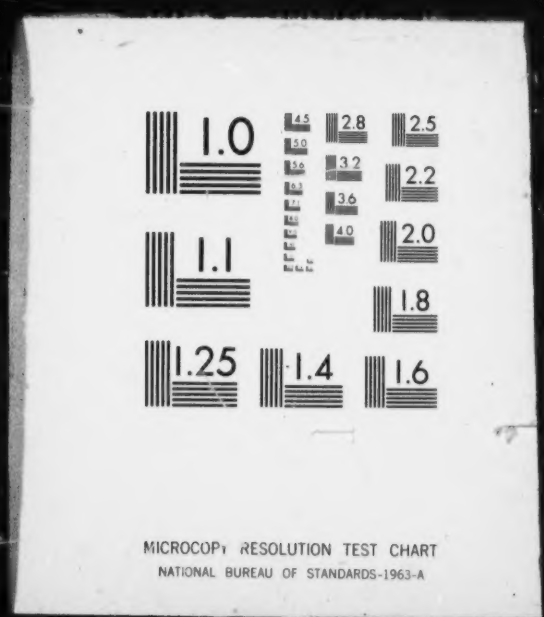

bowler's person encroaches upon or goes beyond the foul line and touches any part of the lane, equipment or building during or after executing a legal delivery. A ball is in play and a foul may be called after legal delivery has been made and until the same or another player is on the approach in position to make a succeeding delivery.

If the player commits a foul which is apparent to both captains or one or more members of each of the opposing teams competing in a league or tournament on the same pair of lanes where the foul is committed, or to the official scorer or a tournament official, and should the foul judge or umpire through negligence fail to see it committed or an ABC approved automatic foul detecting device fails to record it, a foul shall nevertheless be declared and so recorded.

DELIBERATE FOUL

Rule 16. If a player deliberately fouls to benefit by the calling of a foul, she shall be immediately disqualified from further participation in the series then in play and her place may be taken by another player. The deliberate foul shall not be allowed.

A player who willfully throws her ball into the gutter shall be immediately removed from the game and series and her place may be taken by another player.

If no substitute is available to take the place of the removed player, her team shall be credited only with the pins knocked down up to the time the player was disqualified plus one-tenth of her absentee score for each of the remaining frames in the game.

FOUL COUNTS AS BALL BOWLED

Rule 17. A foul ball shall be recorded as a ball bowled by the player, but any pins bowled down when a foul is committed shall not count. When the player fouls upon delivering the first ball of a frame, all pins knocked down must be respotted, and only those pins knocked down by the second ball may be counted. If she bowls down all the pins with her second ball after fouling with the first, it shall be scored as a spare. When less than ten pins are bowled down on the second ball after fouling on the first, it shall be scored as an error. A player who fouls when delivering her second ball of a frame shall be credited with only those pins bowled down with her first ball, provided no foul was committed when the first ball was delivered. When a bowler fouls during the delivery of her first ball in the tenth frame and bowls down all ten pins with her second ball (making a spare), she bowls a third ball and is credited with a spare plus the pins bowled down with the third ball. When a player fouls while delivering her third ball in the tenth frame, only those pins bowled down in delivering her first two balls shall be counted.

AJBC Rules Covering Organization of Leagues*

DEFINITION AND QUALIFICATIONS

Rule 100. Any league consisting of four or more teams with a minimum of two members, per team, and bowling according to a prearranged schedule shall be defined as a league, and may be sanctioned with the American Junior Bowling Congress.

Rule 101. Singles leagues with a minimum of four junior members may be sanctioned. Juniors bowling with adults in leagues where no cash or merchandise prizes are offered may also be sanctioned by AJBC.

> *Editor's Note:* Awards to both adult and junior bowlers in adult-junior leagues must be confined to awards permitted in their state under the AJBC eligibility rule. The maximum value per award as outlined in the current AJBC Program must be followed for both adults and juniors.

Rule 102. Such league, if sanctioned, shall bowl its schedule regularly as provided in its Constitution.

Rule 103. AJBC leagues may consist of all boys or all girls, or boys and girls. Leagues may be organized to include bowlers of all age levels in the same league, but AJBC special awards are based on the individual's age division.

> *Editor's Note:* AJBC age divisions based on individual's age as of August 1 of the current season are:
> Bantams – 12 years of age and under
> Juniors – 13 thru 15 years of age
> Seniors – 16 thru 21 years of age

MEMBERSHIP – MEMBERSHIP DUES

Rule 104. Membership in AJBC is open to all boys and girls, qualified under the AJBC eligibility rule, who have not reached their 22nd birthday on or before August 1 of the current bowling year. Once sanctioned under this rule an AJBC member is an eligible bowler until July 31 of the current bowling year, unless under suspension.

Rule 105. The AJBC current membership year runs from August 1 through July 31 of the following year. Junior membership shall expire on July 31 of the season in which issued except that membership will continue to be valid in tournaments until October 1

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for those who are under 22 years of age on August 1. In addition membership issued in a league which starts its playing schedule on or after March 15 shall be valid for the following season for those who are under 22 years of age as of August 1.

Rule 106. The AJBC membership fee shall be 50 cents per member which shall be submitted to the local AJBC association along with a league sanction application (Form AJ-6) and an individual membership application (Form AJ-14) for each member. The sanction application and membership dues must be filed with the local AJBC association secretary within 30 days after the start of the league's schedule. Supplementary league members must complete an individual membership application (Form AJ-14) which shall be submitted to the local AJBC association.

The payment of one AJBC membership fee entitles the member to participate in any number of leagues. AJBC members participating in a league other than the league through which they are sanctioned must complete an individual membership application (Form AJ-14) for each league in which they participate.

Rule 107. The local AJBC association shall be permitted to charge an additional 50 cents as its portion of the membership fee to help defray the cost of local services to the AJBC members in the area. In no case shall the combined membership fee for an AJBC member exceed $1.00.

Rule 108. Membership in AJBC can be obtained through a league only. No unattached memberships are given. In a league comprised entirely of junior bowlers, all participants must be members of AJBC. In adult-junior leagues, all junior bowlers must be members of AJBC if the league is to be issued an AJBC sanction. No league will be accepted for sanctioning directly to the AJBC office.

> *Editor's Note:* If there is no local AJBC association serving the area the sanction application will be filed through the ABC local association.

Rule 109. A league whose schedule begins on or after August 1 and before March 15 is classified as a winter league. A league whose schedule begins on or after March 15 and ends prior to October 1 is classified as a summer league. Any league ending after October 1 will be classified as a winter league in the following bowling season. All members of such a league are required to purchase the following season's membership cards.

Where the number of junior bowlers is constant on each team in adult-junior leagues all AJBC awards shall be made available. Where the number is not constant, the junior members shall qualify for

special awards. League awards in such leagues shall be made available upon special application to AJBC.

Rule 110. AJBC Eligibility Rule

Members of the American Junior Bowling Congress may:

(a) Bowl for trophies, medals, emblems or other symbolic awards within the maximum cost for such awards as established by the state high school athletic association in their state.

(b) Bowl in events within any maximum travel distance allowance adopted by their state high school athletic association.

(c) In the year of their graduation from high school compete in events offering college scholarships or grants in aid if bowling scores do not constitute more than fifty percent (50%) of the considerations for determining the recipients of such awards. Such events must conform with the state high school athletic association eligibility rules.

Travel expenses must be disbursed by an adult except in instances where an AJBC member is personally paying his own expenses.

Any member of AJBC, or any individual under the age of twenty-two (22) who is not a member, who bowls, substitutes or paces in any type of bowling competition where money or merchandise prizes are offered on the basis of bowling score, bowling skill or position standing, shall be ineligible for AJBC membership as of the date of such participation.

Note: Merchandise prizes shall be construed to include any prize of commercial or intrinsic value such as, but not limited to, free bowling game(s) – bowling equipment, personalized or otherwise – vacation trips – trading stamps, etc.

The period of ineligibility for AJBC membership shall be determined in conformance with the individual state high school athletic association rules by the State Junior Association Secretary acting on behalf of AJBC. Such individuals shall be advised in writing of the period of ineligibility, which shall be a minimum of sixty (60) days but not to exceed one year.

Any bowler suspended or disqualified from or denied AJBC membership by reason of this rule may make written application for membership privileges to the local association secretary, but such application cannot be granted until the applicant has concluded the specified period of ineligibility during which time he has refrained from competing in AJBC sanctioned competition and all bowling competition where money or merchandise prizes are listed as awards. Action on such application will be considered in accordance with the

provision of this rule and the respective state high school athletic association eligibility rule. Ineligibility remains effective until the individual has been notified in writing by the state junior association secretary of their reinstatement.

The AJBC Eligibility Rule Applies:

1. To AJBC members and to applicants for AJBC membership who violate the rule prior to such application.
2. To any type of bowling competition – leagues, tournaments, open play, television events, etc., – whether sanctioned or unsanctioned, sanctionable or unsanctionable.
3. To bowling, substituting or pacing.
4. Whether there is on behalf of the youngster, personally or otherwise, payment or nonpayment to a prize fund, acceptance of or refusal to accept a prize or portion thereof; scores being counted or not being counted.

Rule 21. Derogatory Conduct. When a bowler is suspended from membership in the American Junior Bowling Congress for conduct derogatory to the best interest of the game, he shall be prohibited and disqualified from thereafter playing with any AJBC sanctioned league or tournament until reinstated by the American Junior Bowling Congress. Any such team which shall knowingly play such disqualified player shall forfeit all games in which such player has taken part and such team may be suspended from membership in the American Junior Bowling Congress.

AJBC CODE

The AJBC suggests this code as a guide to bowling proprietors, instructors, coaches, and others interested in junior bowling to assure a program of wholesome environment, protected athletic eligibility, healthful recreation, and fun for young citizens.

No alcoholic beverages shall be served or consumed in the area where members of the American Junior Bowling Congress are engaged in AJBC functions.

AJBC members shall refrain from smoking during the time any AJBC function in which they are participating is in progress.

AJBC members shall not play pinball machines while any AJBC function or school bowling activity is in progress.

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and Science at Oswego,
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SONJA ROACH
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BONNIE HULBERT
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Madison

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Bowling Visual Aids

Revised by JOYCE CURTIS
Abilene Christian College
Abilene, Texas

FILMS*

America Bowls at the ABC. 16mm, 15 min., sd., b&w. Free loan (3). Presents the 1960 ABC Tournament. Includes many scenes of tournament play featuring Joe Wilman, Buzz Fazio, Joe Norris, Buddy Bomar, and Don Carter.

Bowling. Set of four filmstrips, color. Sale – sound $42.50, silent $37.00 (2). Currently being revised. Unit I: The sport – history, equipment selection, etiquette. Unit II: delivery – grip, armswing, steps, and release. Unit III: aiming – how to use "range finder" system for spot bowling; covers hook, straight, and back-up ball. Unit IV: scoring – explained in simple, easy-to-understand terms.

Bowling. 16mm, 15 min., sd., color. Free loan (3). Entertainment film, showing scenes of Don Ellis performing trick shots in bowling.

Bowling Fever. 16mm, 12 min., sd., b&w. Free loan (3). Presents bowling techniques and the pleasures to be derived from bowling.

Bowling Fundamentals. 16mm, 15 min., b&w. Rental $5.00 (4). Problems of beginner with progress through instruction in grasp, stance, approach, release of ball, and follow through.

Decision. 16mm, 20 min., sd., color. Free loan (3). Story of how a woman's discovery of bowling developed new friends and interests.

Duckpin Bowling. 16mm, 20 min., sd., b&w. Free loan (3). An interesting film about Duckpin Bowling – everybody's game. History of bowling and basic instructions on how to enjoy the sport.

Fun on the Lanes: Young America Goes Bowling. 16mm, 17 min., sd., b&w. Free loan (1). 1964 AJBC league in action. Shows formation of league, election of officers, league play, season-ending awards banquets.

King of the Pins. 16mm, 10 min., sd., b&w. Free loan (3). Shows Joe Wilman; includes slapstick comedy by Buddy Hackett, but is instructional as well as entertaining.

Let's Roll with the Champions. 16mm, 15 min., sd., b&w. Free loan (3). Features St. Louis Budweiser bowling team which

*Numbers in parentheses refer to film distributors listed on p. 00.

demonstrates basic fundamentals of bowling and performs precision trick shots.

New Horizons. 16mm, 20 min., color, sd. Free loan (3). Informative film about how a bowling ball and pin are made. A trip to one of the Brunswick factories shows the making and operation of the Automatic Pinsetter.

On The Spot. 16mm, 12½ min., sd. Free loan (1,3,5). The importance of choosing a target on the lane over which to roll the ball is demonstrated by Dick Weber, Dave Davis, and Judy Cook. Several basic spare pickups are explained. Film utilizes slow motion, stop action, overprinted diagrams, and split screen presentations.

Tell It to the Girls. 16mm, 22 min., sd. Free loan (5). Describes WIBC's services, as told by a typical league member.

Tenpin Showcase. 16mm, 18½ min., sd., b&w. Free loan (1). Includes highlights of ABC Tournament, college champions, and Master's Tournament.

To The Foul Line. 16mm, 12½ min., sd. Free loan (1,3,5). Dick Weber demonstrates arm and backswing, the walk to the foul line, and proper ball release. Judy Cook shows how to do it, feminine style. Film utilizes slow motion, stop action, overprinted diagrams, and split screen presentations.

Top Star Bowling. 16mm, sd., 50 min., b&w. Free loan (3). Brunswick has made available 49 filmed matches from the current Top Star Bowling Television Series. Programs: 7 – Joy Abel vs. Marion Ladewig; 20 – Shirley Garms vs. LaVerne Carter; 33 – Judy Audsley vs. Marion Ladewig; and 46 – Joy Abel vs. LaVerne Carter.

Who's Keeping Score. 16mm, 12 min., sd., color. Free loan (5). An interesting and informative film about the latest innovations in bowling – the Brunswick Automatic Scorer completely eliminates manual scorekeeping and adds more fun and excitement to the game through its computerized system.

FILM DISTRIBUTORS

(1) American Bowling Congress, Film Library, 1572 E. Capitol Dr., Milwaukee, Wis. 53211.
(2) The Athletic Institute, 805 Merchandise Mart, Chicago, Ill. 60654.
(3) Brunswick Corporation, Bowling Division Film Library, Don Hill, 200 S. Chester St., Park Ridge, Ill. 60068.
(4) ROA's Films, 1696 N. Astor St., Milwaukee, Wis. 53202.
(5) Women's International Bowling Congress, Film Department, 1225 Dublin Rd., Columbus, Ohio 43215.

FREE AND NOMINAL COST MATERIALS

A Secretary's Handbook. American Bowling Congress, 1572 E. Capitol Dr., Milwaukee, Wis. 53211.

Beginning Bowling. The Athletic Institute, 805 Merchandise Mart, Chicago, Ill. 60654; 35¢.

Better Bowling and How It's Done. Any Ebonite Ball dealer; free.

Bowler's Manual. Women's International Bowling Congress, 1225 Dublin Rd., Columbus, Ohio 43215; free (revised).

Bowling Film Guide. Bowling Proprietors Association of America, Inc., 111 S. Washington, Park Ridge, Ill. 60068; free.

Bowling's Great . . . for Fun and Fitness. AMF Bowling Products Group, Jericho Turnpike, Westbury, L.I., N.Y. 11590.

Bowling Guide 1968-1969. Snibbe Sports Publications, Inc., 80 South Indian Rocks Rds., Largo, Fla. 33540; 50¢.

Candlepin Handbook for Better Bowling. Bowl-Mor Co., Newtown Rd., Littleton, Mass. 01460; 25¢.

Duckpin Bowler's Handbook. National Duckpin Bowling Congress, 711 Fourteenth St., Suite 501, Washington, D.C. 20005; 25¢.

The Four Kinds of Bowling. Macfadden Bartell Corp., 205 E. 42 St., New York, N.Y. 10017; 50¢.

How to Have the Most Bowling Fun. National Bowling Council, 2000 L St., N.W., Washington, D.C. 20036; single copies free.

How to Improve Your Bowling. The Athletic Institute, 805 Merchandise Mart, Chicago, Ill. 60654; 50¢; condensed booklet 10¢.

How to Keep Score. Various bowling manufacturers. Generally available at local sporting goods stores; free.

How To Keep the Averages and Handicaps of a League. American Junior Bowling Congress, 1572 E. Capitol Dr., Milwaukee, Wis. 53211; free.

How To Organize and Conduct a School of Bowling. American Junior Bowling Congress, 1572 E. Capitol Dr., Milwaukee, Wis. 53211; free.

How To Score. AMF Bowling Products Group, Jericho Turnpike, Westbury, L.I., N.Y. 11590.

Roll On to Better Bowling. American Visuals Corp., 460 Fourth Ave., New York, N.Y. 10016; free.

Secrets of the Stars. Any Brunswick dealer; free.

Ten Pin Tips for Teenagers. AMF Bowling Products Group, Jericho Turnpike, Westbury, L.I., N.Y. 11590.

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[1] Current *Guide* material was prepared by the 1971-73 Committee; material for the 1974-76 *Guide* will be prepared by the 1973-75 Committee.

For Fencing Teachers Who Know Little about the Sport

MARY HEINECKE

Mary Heinecke is an associate professor of physical education at Lawrence University, Appleton, Wis. She received her B.A. degree from Valparaiso University, Valparaiso, Ind., and her M.Ed. from Miami University, Oxford, Ohio. She was the Wisconsin State Open Fencing Champion for the past five years and was nationally ranked in 1968 and 1969. She has recently coauthored a book, Fencing, *with Max Garret for Allyn Bacon, published in 1971.*

A considerable amount of work is required to become a competent fencing teacher. Unlike volleyball, baseball, basketball or tennis, badminton, squash (groups of sports which have common elements), there are few aspects about fencing that can be related to other experiences you have had. The physical education teacher is often assigned to teach an activity about which she knows little. Underestimating the difficulty of teaching fencing does the teacher a great disservice. Keeping one lesson ahead of the students does not help her confidence. While teaching fencing is not easy, the end results far exceed the amount of input.

As in other teaching situations, the most crucial factor for a beginning fencing teacher is her attitude. A display of enthusiasm, a willingness to learn from her mistakes, and the desire to help students learn the activity can be extremely helpful. Fencing does not enjoy a widespread popularity due, in great part, to the dearth of teachers willing or able to teach it. Many schools have invested money in equipment which lies unused for lack of teachers – not lack of interest.

What can you do to improve your knowledge and technique of fencing and how can you help your students learn the sport?

How can you prepare yourself to become a fencing teacher and learn some of the basic skills?

1. Join the Amateur Fencers League of America (AFLA), the amateur body which governs fencing competition and works with the AAU, NCAA, and the Olympic Committee. An associate membership for noncompetitors is $3 per year and entitles you to receive a periodical and an official rules book. Many instruction materials are available through the AFLA office. For information, contact the AFLA Secretary, 33 62nd Street, West New York, New Jersey 07093.

2. Contact the following persons in your geographical area for information about fencing activities and competitions: university and high school coaches, the state DGWS fencing chairman, and the divisional AFLA secretary whose name can be secured by writing to the AFLA. Get to know the local fencing enthusiasts and experts. Attend as many classes and competitions as possible, introduce yourself to those in charge, ask questions, and observe the fencing.
3. Read books. This *Guide* lists many publications (see Bibliography, pp. 166-68). Past DGWS *Guides* are of great help. While the amount of material published about fencing does not compare in quantity to that for many other sports, the available material is high in quality and usefulness.
4. Arrange to take some lessons. Many metropolitan areas have at least one fencing master or group. A series of lessons will help you to improve and develop your own technique and to observe how the skills are taught.
5. Take advantage of workshops in the teaching and officiating of fencing. Local DGWS fencing chairmen, the AFLA division, and university groups conduct such workshops from time to time. There you will meet others with similar concerns and your questions can be answered.
6. Arrange to have the more experienced competitive fencers in your area perform a demonstration for your classes or for the entire student body. If your facilities are available, invite groups to conduct a workshop at your school.
7. Ask questions and write to people whose ability you respect. Never feel that anyone is too busy to be of help or that you are not sufficiently well versed to communicate with the experts.
8. Practice. Go through the techniques before a mirror, observing yourself and correcting faults. Ten to 15 minutes of daily practice on basic techniques either by yourself (advancing, retreating, lunging, recovering, and combining these skills) or with another person (simple attacks and defense) will pay off handsomely.
9. If you have a videotape, observe and evaluate your own performance. Also, devise productive ways of using this machine to help your students observe and evaluate their skills.
10. Review kinesiological principles of mechanics and movement, and apply them in analyzing techniques in terms of base of support, direction of movement, balance, mobility, distance, control, and trajectories.
11. Join the National Fencing Coaches Association of America (NFCAA), composed of fencing teachers and coaches. Membership is $15 per year and entitles you to receive a

periodical and to be in contact with a professional group. For information, contact the NFCAA President, 622 East Oakside Street, South Bend, Indiana 46614.

How can you, with a minimum of experience, help your students learn and enjoy fencing?

1. Use a beginning progression that seems logical to you. Many books provide such progressions.
2. Apply the same sound educational principles to fencing as you do to any other sport: use some problem-solving techniques; demonstrate the whole, then the parts, and then the whole again; evaluate the performance and then redo it.
3. Make the students work hard. They will come back tired and a little sore the first few times, but they will begin to see what the future can hold in combat, excitement, and challenge.
4. Develop a daily routine that includes the following aspects:

   Warmup. Emphasize this phase particularly at the beginning of the course. The knees, legs, and arms require special attention. Before lunging each class period, do some gradual stretching of the adductors and hamstrings and exercises to condition the quadriceps. Do not use duck waddles. If you use situps, be certain to use the hook-lying position so that the abdominals rather than the iliopsoas are strengthened.

   Footwork. Mobility is a cardinal requisite. Advancing and retreating quickly with varied patterns and recovering either forward or to the rear from a lunge are necessary to enable a fencer to vary and control his distance. Work at this singly and in pairs prior to introducing the lesson.

   Something old. Review the previous day's lesson and relate it to the current lesson. Use various methods for review.

   Something new. Teach one new concept or technique each day. Find many different ways to approach each idea.

   Mini bouting. Once the footwork and a basic attack and defense have been learned, introduce bouting on a very small scale. This is a wonderful motivating device. Establish your own restrictions, but give the students a chance to apply what they have learned.
5. Teach a few skills well rather than many superficially. In a 6- to 10-week period, students should learn the following positions and movements well: on guard, salute, advance, retreat, extension, lunge, recovery, straight attack and disengage attack, parry 4 and parry 6, plus a bit of bouting. If your group works out daily for that length of time, you may want to add attacks and defense in the low line, circular parries, the beat attack, and variations on all attacks. However, do not sacrifice the basics for quantity.

6. If your fencing program is starting with a small select group of students through GAA, a senior elective class, or a letter club, let each person become "expert" in one skill and work with that person in helping him share his expertise with others. Learn with your students.

Once you have taken the plunge, you may discover that fencing is your "thing." If not, you will certainly discover that you have provided your students with a chance to learn an activity that may become a lifetime adventure for them.

Teaching Foil Fencing with Improvised Equipment

ELOISE NEWELL CLARK

Eloise Newell Clark (B.S., M.A.) has taught and coached fencing at the University of North Carolina, Stetson University, DeLand, Fla., and Daytona Beach Community College, where she is presently located. She attended the Second National Institute and has conducted clinics in Florida. She headed fencing for many years at Camp Ton-A-Wandah, Hendersonville, N.C., and is a member of AFLA and NFCAA.

For a number of years, elementary and high school physical education teachers have confronted college instructors after fencing demonstrations to inquire as to the means of introducing fencing into their programs. Always the cost factor seemed to raise its ugly head. Consequently, college instructors would suggest improvisation. However, this suggestion was made with no facts or research to support it. Could it really be done?

Daytona Beach Community College decided to implement the idea of teaching youngsters with improvised equipment. The results were presented to a Region 2 Workshop of the Florida AHPER.

Since foil fencing rarely has been introduced on the elementary school level – because of factors such as initial equipment cost, fear of teaching a combative sport to undisciplined children, lack of trained instructors, and lack of sports identity – the challenge to solve these problems began to formulate ideas in the author's mind. Using a dowel first occurred while observing a child "play fencing" with a yardstick. Then noting the apparent success of A. John Geraci with six and eight-year-olds, further encouragement was received to implement the ideas.[1]

With the Florida AHPER workshop, a program was planned using sixth graders as participants. Since the Highland Elementary School was located adjacent to the Daytona Beach Community College gymnasium, it was possible to start with 33 volunteer students. Permission notes were sent to the parents with one requirement – that the student plan to perform in the workshop demonstration.

The 33 boys and girls began their 12 lessons in movement fundamentals with dowels, meeting twice a week for about 40 minutes (or during their actual physical education period). Tennis shoes and activity clothes were required. The dowels were furnished

[1] "Community Plan," *American Fencing* (May 1968), p. 15.

by the college. Each dowel was 24 x ¾ inches. The 6-inch handle was sanded and the rest of the dowel was painted red or white.

Since the most important problem was to maintain safety with the dowels in a relatively hyperkinetic group, each student was taught constantly how to use self-discipline and master complete control of the dowel so that the hands of his partner would not be hit. No touches were made against the body since the parries were taught with the attacking techniques. In fact, all techniques appeared to be routine movements, and the students liked to hear the sound of the dowel "clicks" in parrying. Discipline was maintained by treating the group as one would marchers or formal gymnasts, removing the undisciplined child to watch and learn. Consequently, an esprit de corps prevailed. Only a whistle was needed to stop action to repractice a technique.

The position of the hand in the *en guarde* was demonstrated with the hand in the supine position, thumb out to the right, and index finger straight ahead then the three aid fingers were closed. As the arm was extended in the thrust, the children rotated the hand to the left so that the index finger appeared to be "shooting a gun," and the thumb was now on top. Then the dowel was introduced, using a grip which molded the thumb along the length of the wood with the index finger cupping the dowel in the middle phalanx. From this point forward, the correct grip was maintained and checked throughout the mobility exercises. Quite frequently a student would be seen outside of class shooting at another with the thrust technique.

After introducing five or six individual style salutes, the basic platform of the *en guarde* position was introduced. Youngsters of this age are not as self-conscious as older students, and they accept the flexed knee sitting position. This was followed with extensive work in mobility – advance, retreat, lunge, and recovery forward and backward, all of which required no equipment. With the platform established, work proceeded with the upper area, including the arm extension or thrust, control of point, parries 6, 4, 8, 7, two semicircular parries, disengage, cutting-the-line, cutting-over, beat. glide, bind, envelopement, and counter parries. Terminology was quickly acquired. However, no attempt was made to explain fencing or its objectives. The thrust-lunge, where contact was made only against the wall, was performed 25 times each session before the lesson began. The students gained additional practice on their own time at home. Techniques and drills were taught to two groups on a competing team basis, permitting as much fun as possible, but always emphasizing precision and esprit de corps.

Demonstration

At the Region 2 Workshop, 24 "surviving" students were given the chance to show off their newly acquired dowel skills. They marched into the gym in two lines, gave three appropriate salutes, then demonstrated twice each offensive and defensive technique as well as mobility exercises. Upon completion of the demonstration, feeling rather proud, they marched to the side of the gym, where they were quickly dressed in fencing jackets, masks, and given a foil for the first time. Puzzled, engrossed, and excited over the completely unexpected turn of events, they were marched back to their previous places, carrying the foil as they had carried the dowel. They completely forgot the audience and proceeded to demonstrate the same techniques although with somewhat greater effort than before because of the longer foil. Keep in mind that their entire training was composed of disciplined commands on a group basis similar to the training in marching or gymnastics. They soon forgot the mesh wiring of the mask and the longer blades. The learning transfer was completed. The fun now developed with their first attempt to make a touch and not be touched in return.

Since this experiment, the author has used dowels in high school and college classes to illustrate the point that basic techniques can be taught early and the transfer of learning is very good.

At the present time, a club group of New Smyrna Beach High School students are learning the techniques with dowels and garden gloves until their orders of personal equipment are filled. Thus far, the group has increased in membership rather than declined, as is often the case in volunteer membership.

As students master the techniques of footwork and dowel control, they will want to progress to foils and professional equipment. If the schools cannot or will not furnish such equipment, the course could be called "Movement Fundamentals with Dowels." But somewhere, sometime, the student will come in contact with an "equipped" program or will acquire his own equipment. Then the basics he has learned will be quickly recalled. Consequently, the instructor can feel that she has done her part in exposing more children and students to the art and fun of fencing.

What a Fencer Can Do To Help Herself Develop

CHARLES R. SCHMITTER

Charles R. Schmitter is a graduate of the University of Detroit. For 30 years, he has been the fencing coach at Michigan State University, East Lansing. He received a diploma from the National Academy of Fencing, Naples, and has studied with Santelli, Castello, Cabijos, and Giuseppe Mangiarotti of Milan. He is a member of the National Fencing Coaches Association of America, an organization which he founded, and a member of the Helms Foundation of Fame.

Fencing has much in common with music in that it requires talent and dedication. The fact that there are not more good fencers is due not to a lack of ability but a lack of dedication which motivates the individual to steady, intelligent practice. The teacher can impart ideas which must then be built into the person by her own efforts. Below are some exercises which will help to develop point control, mobility, and the skill to move the hand purposefully while the feet automatically do their part. These exercises have been used for many years with success by those who persisted.

Point Control Exercises

Stand within thrusting distance of a target 15 to 18 inches square. Cover the fourth line and extend, hitting a preselected spot. Repeat several times. Close the eyes and extend, trying to hit the same spot. If you are off the spot, place the point, close the eyes, and concentrate on the "feel" of hitting that spot. Repeat the above in sixth, seventh, and eighth. This exercise may also be done using counter parries and half-circle parries.

When these are becoming controlled, compound parries may be used. This exercise is a variation of the blindfolded lesson. Emphasis should be on control. Extend the arm and make circles of 8 to 10 inches in diameter with the fingers or wrist; avoid "whipping" the blade to form the circles. Cultivate the ability to hold the circle at the top of the exercise. Repeat in all directions. If the arm begins to tire and tense, rest awhile. Five to 10 minutes of this exercise daily will result in control and endurance. If the fingers are used, the hand is also strengthened.

Mobility Exercises

Practice combinations of advances, retreats, lunge, advance-and-lunge, balestra, gain (advance, moving the back foot up to the front) and lunge, lunge with recovery to the front, double lunge, jump backward from the lunge, and the guard position. These should be done daily if possible. Every practice period should begin and end with fundamental footwork practice. The exercise should be done precisely, concentrating on correctness and speed.

Hand and Foot Exercises

From the guard position, practice a series of advances and retreats, extending the arm randomly during the process, i.e., advance-advance and extend, retreat, and return to the guard position. This type of exercise leads to the ability to fence with the hand and the head while the feet do their part automatically. Pay special attention to the practice of retreating and attacking. Changing direction from retreat to attack is difficult and needs practice.

Most of the above attack exercises may also be done using the flèche. Care must be taken not to fall into the trap which ensnares many beginners – a too liberal use of the flèche.

The fencing master can plant seeds in a student's mind but no fruit will result unless the student cultivates the tools provided above.

Fencing Visual Aids

BARBARA BAXTER PILLINGER

Barbara Pillinger, a summa cum laude graduate of the University of Illinois, received her M.S. degree in physical education from Smith College, Northampton, Mass. She also holds masters and doctoral degrees in psychology from Harvard University, Cambridge, Mass. Her Radcliffe College fencing team won the New England Women's Intercollegiate Fencing Championship in 1963, 1964, and 1965. She presently teaches at the University of Wisconsin-Madison.

Numbers in parentheses refer to film distributors listed at the end of the article.

16mm Films

Basic Training of Foil Fencing. 22 min., b&w, sd. Sale: $135, rental: $12, film #7024. (7). Rental only: $4 per week, film #3K024. (8). This film was made by master fencers and Olympic coaches at the Hungarian College of Physical Education in Budapest. It has a good presentation of basic training in foil fundamentals, including fencing distance and invitation, conditioning exercises, and offensive and defensive practice routines. The film utilizes slow-motion, still, and some trick photography. Recommended for experienced fencers.

Fencing-1964 Olympics-Tokyo, Japan. B&w. Rental: $5 for a three-day period. (2). This film features the training, competitive techniques, and bouting of the world's outstanding male and female fencers, as well as the Olympic victory ceremonies. Unlike other films, this film shows *complete* bouts. All the AFLA films seem to have waiting lists! Inquire at same source for possible 1972 Munich Olympic films (there is apparently no fencing film available from the 1968 Olympic Games other than personal 8mm home movies). Excellent for intermediate or advanced fencers.

Foil Fencing: Judging and Directing. 30 min., sd., color, b&w. Rental fee not determined at time of review. (8). A doctoral project by Susanne Pernice at the University of Iowa, this new film is fully narrated. No guide or manual is necessary. The film is divided into six sections: (1) free fencing, (2) officiating terminology, (3) officials' positions and duties on a model strip, (4) a director and four judges in action, (5) viewer self-testing on officiating decisions, and (6) a brief introduction to electrical equipment. The self-testing section is shown twice, enabling

students or teachers to check their own scoring accuracy. This film fills a long-awaited need for more effective training of women fencing officials, especially in the art of directing.

Foil Fundamentals. B&w. Rental: $5 for a three-day period. (2). This film is interspersed with descriptive titles by Maestro George Santelli. It is an excellent presentation of salute, en garde, and footwork, as well as a clear portrayal of offensive and defensive skills (attacks and parries). There is only one copy of this film and a waiting list, so write early.

Instructional Film on Fencing. 1939. 14 min., b&w. Available for sale or rental. (4). This film by J. Martinez Castello is an oldie but goodie. The film emphasizes form, control, progressive "building," and practice routines, and suggests a particularly good exercise for deceiving parries. The film is a bit slow-moving but picks up later on. It follows *The Theory and Practice of Fencing* by Julio Martinez Castello (New York: Scribner's, 1933). Slow motion and closeups help the viewers see the details so inherent in good fencing. Professor Castello demonstrates a proper sequence for an individual foil lesson, a sort of classic lesson with an old master. The bout at the end of the film has a Charlie Chaplinesque quality – my students laughed heartily! A classic of its type.

Let's Take A Trip. B&w, sd. Available for rental. (2). This film was originated by Sonny Fox, television personality. Made at the New York Fencers Club, it is good for general audiences and public information purposes. It has an excellent presentation of foil, épée, and sabre techniques and bouting.

Man of Peace. B&w. Rental: $5 for a three-day period. (2). Ralph Faulkner, former Olympian, stars in this film originally prepared for TV Fireside Theatre. Based on the Olympic creed that participation is more important than winning, this excellent "propaganda" film features the sport of fencing to emphasize qualities of sportsmanship.

Omnibus. B&w, sd. Rental: $5 for a three-day period. (2). This outstanding international film was originally prepared by the Ford Foundation for television. It introduces all three weapons and has excellent cinematography. It is probably the best film available to introduce fencing. Highly recommended for classes, fencing clinics, and general audiences to arouse interest in fencing. Write early – there's a waiting list.

Loop Films

Fencing With the Foil. Series of 19 loops, color. Designed for use in either a Technicolor or Kodak Super 8mm cartridge projector. Sale: $18.95 each, $342 series. (6). Maxwell Garret, fencing

coach at the University of Illinois, served as consultant. The demonstrators include Michel Alaux, 1968 U.S. Olympic foil team coach; Michael Gaylor, 1967 NCAA foil champion, New York University; and Anne Seppala, 1969 captain of the Hunter College fencing team. Stop action or "freeze frame" and slow motion sequences help to emphasize key skill techniques. The same small loop film guide on foil fencing accompanies each film cartridge. The guide may also be purchased separately for 25¢. My students at Wisconsin find the loops somewhat slow-moving and repetitive and the filming unclear at times, e.g., it is not always easy to see the blades. The captions do not seem to fit the movements. The films are very basic, a trifle boring, and unexciting compared to Selberg's films (see *Modern Foil Techniques* below). The sequences also bothered me a bit. I found it disconcerting, for example to present parry 6 before parry 4, when parry 4 is a much more natural movement and easier for students to learn. The individual lesson (loop #19) also left something to be desired, such as captions to explain the action. In 1972, the Athletic Institute (distributor of the film) offered a free projector with an order of 30 or more of their *Sports Techniques* loop films. Check with them for current offers of this type. With persistence, the Athletic Institute will send "convention materials" (used film loops) for preview purposes. Recommended but not enthusiastically.

Modern Foil Techniques. Series of 20 loops, 3 min. ea., color. Designed for use in a Technicolor Super 8mm loop film projector (projectors can be included in the package). Sale: $22 each, $380 series. (3). This new series was prepared by Charles A. Selberg, fencing coach at the University of California-Santa Cruz. Simple in presentation, yet sophisticated in content, the loops are designed for either self-instruction or classroom use. A separate printed study guide accompanies each film cartridge and contains objectives, observation suggestions for running and rerunning the film, as well as practice routines. The films are clearly labeled with superimposed captions which point out correct techniques, common errors, and a detailed analysis of each move. The more complicated maneuvers are shown in slow motion. Most actions are photographed from several viewpoints to facilitate a clear understanding of the techniques involved. One of the features of this series is a clear demonstration of common errors, thus enabling a physical education instructor with limited knowledge of the sport to recognize an incorrect position and/or technique easily. A preview kit of three films (#4 – The Lunge; #7 – Highline Parries and Direct Ripostes; #13 – Feint Attacks) is available from the distributor. Expensive, but highly

recommended. A superb instruction aid for both beginning and more advanced fencers.

Filmstrip

Beginning Fencing, 1959. 35mm, color. Sale: $51.75. (5). Prepared by the Athletic Institute under the direction of Maxwell Garret, University of Illinois fencing coach. Two sound records accompany the four filmstrip units: (1) Introduction to Foil Fencing, (2) Elementary Offense, (3) Elementary Defense, and (4) Strategy and Tactics. Also available are related books that may be used in conjunction with the filmstrip: Maxwell Garret's *Fencing Instructor's Guide* (1960) and *How to Improve Your Fencing* (1959). The latter booklet will be replaced in 1972 by *Fencing*, a handbook in the new *Sports Techniques* series from the Athletic Institute. This filmstrip has been around awhile but it's still good. Its chief liability is lack of movement.

Other Visual Materials

Fencing Chart. An attractive 17" x 22" chart showing 28 black and white pictures from *Fencing* by Hugo and James Castello (New York: Ronald Press, 1962). Hugo Castello will send these charts free of charge to teachers or coaches who wish to use them for clinics, workshops, etc. Excellent for the bulletin board. (4).

Modern Fundamentals of Foil Fencing. A boxed portfolio of 16 11" x 14" black and white photographs by A. John Geraci, photographer/fencer and West Point fencing coach. Illustrations cover basic positions, attacks, and parries. Excellent photography on quality paper. $7.50, plus postage. (1).

Modern Fundamentals of Foil Fencing. Sixteen 35mm black and white slides of the above Geraci photographs. Instruction sheet included. $16, plus postage. (1).

Collectors' Edition Fencing Prints (circa 1763). Six 8" x 10" lithographed prints copied from the first English edition of Henry Angelo's *Escole Des Armes*, an early treatise on fencing. This English edition was dedicated to the English princes, the Dukes of York and Gloucester, who were Angelo's pupils. Reproduced on quality antique weight paper, these prints capture fencing's historical and romantic past. Unique prizes for class tournaments and for the bulletin board. $6, plus postage. (1).

Distributors

(1) A. John Geraci, 279 E. Northfield Rd., Livingston, N.J. 07039.
(2) Amateur Fencers League of America, 33 62nd St., West New York, N.J. 07093.

(3) Bill Snyder Films, P.O. Box 2784, Fargo, N.D. 58102.
(4) Castello Fencing Equipment Co., 836 Broadway, New York, N.Y. 10003.
(5) Society for Visual Education, 1345 W. Diversey Parkway, Chicago, Ill. 60614.
(6) The Athletic Institute, 805 Merchandise Mart, Chicago, Ill. 60654.
(7) University of California, Extension Media Center, 2223 Fulton Street, Berkeley 94720.
(8) University of Iowa, Motion Picture Production Unit, East Hall, Iowa City 52240.

Listing of Qualified Directors for Foil Competitions

LISEL K. JUDGE

Lisel K. Judge obtained her B.S. degree from Boston University, and her M.S. degree from Northeastern University, Boston. She is associate professor of physical education at Brandeis University in Waltham, Massachusetts, and director of Women's Physical Education and Athletics. Before accepting the position as fencing coach at Brandeis in 1953, she had won many championships in Germany, was New England Champion for many years, and was ranked third nationally. She was the first woman to be accepted as a member of the National Fencing Coaches Association and founded the New England Intercollegiate and the New England Interscholastic Women's Fencing Associations. She was New England DGWS fencing chairman for many years and conducted numerous clinics and workshops. She has also appeared several times on television and radio. Her fencing team at Brandeis has always been one of the most outstanding in New England.

ALABAMA*

Belser, Thomas A. (O)** Auburn University	535 E. Samford, Auburn 36830
Hamer, Les (O)	University of Alabama Engineering Dept., Birmingham 35233
Jordan, John R. (O)	10103 Todd Mill Rd., S.E., Huntsville 35803
Jovaras, C. W. (O)	108 Acton Ave., Birmingham 35209
Rea, Robert R. (O) Auburn University	768 Cary Dr., Auburn 36830

ARIZONA

Jennings, Patricia (C)	5652 E. Silver St., Tucson 85716 296-5825

*This list of directors was compiled in the winter of 1971; there will inevitably be some outdated information. For updated information, contact U.S. Commission on Fencing, Rules and Officials, Chaba M. Pallaghy, 99-11 Queens Blvd., Forest Hills, New York 11374.

**C=Coach
O=Official

CALIFORNIA

Angell, Miss Tommy (O)	50 Florida, Berkeley 94707
Appice, Frank (O)	8602 Guilford Ave., Whittier 90605
Biagini, Gerard (C) Samuel Gompers High School	755 87th St., Daly City 94015 PL 6-8971
Bleamaster, Leslie II (C) Fencers Club	516 N. Harbor St., Fullerton 92632 526-5453
Bleamaster, Virginia (O)	1349 Shadow Lane #G, Fullerton 92631
Borack, C. (O)	Box 324, Beverly Hills 90213
Bower, Muriel (C) San Fernando Valley State College	19718 Stagg St., Winnetka 91306 882-1329
Calvert, Delmar (C) Los Angeles Athletic Club	5342½ Russell Ave., Los Angeles 90027 467-8901
Christie, K. (O)	5645 Parkmor Rd., Calabasas 91302
Christman, Ronald (C)	5030 Hartnett Ave., Richmond 94804 233-8616
Clovis, G. (O)	9160 Fairview Ave., San Gabriel 91775
Edelman, Richard (C)	1725 Oxford St. #6, Berkeley 94709
Elliot, J. (O)	20 Ave. 17, #1, Venice 90291
Etter, P. (O)	10661 Wilkins Ave., Los Angeles 90024
Faulkner, Ralph (C) Faulkner School of Fencing	1728½ N. Wilton Pl., Hollywood 90028 HO 2-9356
Filerman, Bernice (O)	216 N. La Peer Dr., Beverly Hills 90211
Franklin, Janet (O)	865 Sungrove, Brea 92621
Franzzini, Ron (O)	538 W. Brookshire Ave., Orange 92665
Fuertes, C. (O)	1143 Hatteras St., North Hollywood 91601
Greenblat, Dan (O)	6324 Lake Albano, San Diego 92119
Helliwell, Jean (C) Stanford University	2240 Page Mill Rd., Palo Alto 94304 323-0924

Hermanson, Alvar (C) San Diego State College	3660-10 Vista Campana N., Oceanside 92054 757-5911
Hoepner, Barbara (C)	6645 Heather Ridge Way, Oakland 94611
Hurley, Mike (O)	10740 Challenge Blvd., La Mesa 92041
Jesseph, Margaret (O)	225 Lake Dr., Berkeley 94708
Johnson, Emily B. (O)	1250 Ellis #11, San Francisco 94109
Lampl, J. (O)	1785 Bel Air Rd., Los Angeles 90024
Linkmeyer, B. (O)	5105 Fulton Ave., Sherman Oaks 91403 872-0956
Linkmeyer, Fred (C)	540 S. Poplar, Brea 92621
McDaniel, Chuck (O)	P.O. Box 134, Aromas 95004 722-1883
McDougall, John (C) American Fencers Supply Company	
McKee, John (C)	3624 Surfwood Rd., Malibu 90265 459-1101
McQuade, Joseph (C)	2289 Union St., San Francisco 94123 346-6653
Marki, Ferene (C)	556 19th Ave., San Francisco 94132 585-0057
Mitchell, M. (O)	10060 Hemlock, Fontana 92335
Moody, Dorothy L. (O)	6645 Heather Ridge Way, Oakland 94611
Morales, Al (O)	938 4th St., Santa Monica 90403
Morris, William (C) Napa College	2580 Utah St., Napa 94558
Mutschenbacher, S. (O)	3139 Dona Maria Dr., Studio City 91604
O'Brien, William (C)	574 39th Ave., San Francisco 94121 221-1749
Orr, Veral (C)	5517 Wilsey Way, Carmichael 95608
Palffy-Alpar, Julius (C) University of California-Berkeley	105 Kenyon Ave., Kensington 94708 525-3286
Rayser, F. (O)	2632 St. George St., Los Angeles 90027

Reclmon, Jo (C) California State College at Long Beach	4275 Pasco De Oro, Cypress 90630 527-5070
Rivera, F. (O)	333 S. Oxford Ave., Los Angeles 90005
Romary, J. (O)	4959 Dunman Ave., Woodland Hills 91364
Rosato, Mary (O)	20508 Leapwood #32C, Gardena 90247
Schweitzer, Don (O)	431 Rospaw, Placentia 92670
Selberg, Charles (C) University of California-Santa Cruz	507 Lighthouse Ave., Santa Cruz 95060 426-6179
Shaw, Robert (O)	1349 W. Central, Brea 92621
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Shailer, Ken, Jr. (O)	
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Gaylor, Peter (O)	
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Brodith, Joseph (O)	193-12 Jamaica Ave., Hollis 11423
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Castello, James (C) New York University	28 Eden Lane, Levittown 11756 PE 1-6829
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Grafton, Marvin (O)	165 Christopher St., Apt. 1H, New York 10014
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Technical Rules of Fencing

EDITED BY NANCY L. CURRY

INTRODUCTORY NOTE

The technical rules of fencing which appear on the following pages, have been edited and sections excerpted from the *AFLA Fencing Rules and Manual,* revised 1970. This new edition, published by the Amateur Fencers League of America, comprises an extensive almanac of history, terminology, rules, and records of fencing in the United States and Europe. Acknowledgement is given to the late José R. de Capriles. Through his cooperation, the AFLA has granted permission to the DGWS to publish certain sections of the rules.

Since modern competitions are conducted with the electrical apparatus, basic rules have been included for running contests with the "electrical" foil. It should be noted that the AFLA is a member of the Federation Internationale d'Escrime (FIE), the United States Olympic Committee (USOC), and the Amateur Athletic Union (AAU). The AFLA maintains close relations with the National Collegiate Athletic Association (NCAA), the Intercollegiate Fencing Association (IFA), the Intercollegiate Women's Fencing Association (IWFA), and several regional intercollegiate associations whose respective jurisdictions of fencers in their member colleges are explicitly recognized.

The traditionally close cooperation between amateurs and their fencing masters was formalized in 1953 by the adoption of constitutional amendments creating the associate membership, open to nonamateurs. Most of the active fencing teachers in the United States are associate members of the AFLA and enjoy voting privileges. The AFLA also maintains close liaison with the National Fencing Coaches Association of America (NFCAA).

For a continuing and thorough understanding of rules and changing times in fencing, readers are urged to obtain a copy of the *AFLA Fencing Rules and Manual.* Copies may be purchased from Amateur Fencers League of America, Inc., 33 Sixty-second Street, West New York, New Jersey 07093.

PART ONE: GENERAL RULES AND RULES APPLICABLE TO THE THREE WEAPONS

CHAPTER I. HISTORICAL NOTE

The technical rules of the Federation Internationale d'Escrime were unanimously adopted by the International Congress of

National Olympic Committees held in Paris in June 1914 for use in all events at the Olympic Games. They were modified by various FIE Congresses and were revised and modernized after the 1958 Congress and renamed "Rules for Competition."

U.S. (additional note) – The rules governing amateur fencing competition in the United States of America are enacted, amended, and repealed solely by action of the national board of governors of the AFLA. From the time of the codification of the international rules, the AFLA, as a matter of policy, has generally followed the changes enacted by the FIE in the technical rules and conventions of fencing, but each modification must be specifically adopted by the board of governors before it is effective for AFLA competitions. The AFLA from time to time has conducted experiments with rules that differ from the international rules, and has found it desirable to adopt certain textual variations or clarifications of the international rules for use in the United States.

The present AFLA rules book reproduces in English translation the official text of the FIE rules, including the numbering of the articles on the margin; and, whenever applicable, adds thereto the variations or clarifications in force in the United States.

CHAPTER III. GLOSSARY

A. President

Throughout these rules the word "president" means "president of the jury" or "director of the bout."

U.S. (note) – In the United States, the term "director" is used to designate the chief official in charge of the bout in all weapons. Internationally, the term "director" is used only in competitions run with electrical apparatus, without a jury.

B. Competitions

1. Assaults and bouts. Friendly combat between two fencers is called an "assault." When score is kept of such combat to determine a result, the contest is called a "bout."

2. Match. The aggregate of the bouts fenced between members of two different teams is called a "match."

U.S. (addition) – In individual events, a "match" is a contest fought for two or more bouts, usually on a direct-elimination basis.

3. Competition. A competition is the aggregate of the bouts (individual contest) or of the matches (team contests) required to determine the winner of the event. Competitions are classified according to weapons, sex of competitors, age, occupation (e.g. military, student, etc.), or according to whether fenced on an individual or team basis.

U.S. (addition) – Competitions in the United States are further classified according to the strength of the contestants allowed to participate therein, and according to the effect of participation or achievement therein upon the classification of the contestants.

4. Championship. "Championship" is the name given to a competition held to determine the best fencer or the best team in each weapon for a national association or for a specific region and for a specific period of time.

5. Tournament. Tournament is the name given to all competitions held at the same place, during the same period, and for the same reason.

C. Explanation of Some Technical Terms Commonly Used in Judging Fencing

1. Fencing tempo. "Fencing tempo" (temps d'escrime) is the time required for the execution of a simple fencing action.

U.S. (clarification) – A fencing tempo is not a fixed interval of time, but a variable which depends upon the speed of the fencers in the sequence of play.

2. Offensive actions

a) Attack or riposte:
- Simple – in one movement
  - Direct – in the same line
  - Indirect – in another line
- Composite – in several movements.

b) Riposte:
- Immediate or delayed – a question of fact and of rapidity of execution.

Example 1. Simple direct ripostes

Direct riposte – a riposte which touches the opponent without leaving the line in which the parry was made.

Riposte along the blade – a riposte which touches the opponent by gliding along his blade after the parry.

Example 2. Simple indirect ripostes

Riposte by disengage – a riposte which touches the opponent in the opposite line to that in which the parry was made (by passing under the opponent's blade if the parry was made in the high line, and over the blade if the parry was made in the low line).

Riposte by cutover – a riposte which touches the opponent in the opposite line to that in which the parry was made, the blade always passing over the opponent's point.

Example 3. Composite ripostes

Riposte by a double – a riposte which touches the opponent in the same line to that in which the parry was made, but after having described a complete circle around the opponent's blade.

Riposte by one-two – A riposte which touches the opponent in the same line in which the parry was made, but after the blade has first threatened the opposite line by passing under the opponent's blade.

3. Counter-attacks

a) The stop hit is a counter attack made on an attack.

b) It is called a "time hit" when it is made while closing the line in which the attack is to be completed.

4. Varieties of offensive actions

a) The remise is a simple and immediate offensive action which follows the original attack, without withdrawal of the arm, after the opponent has parried or retreated, when the latter either has released the blade without riposting or has made a delayed, indirect, or composite riposte.

b) The redoublement is a new action, either simple or composite, made against an opponent who has parried without riposting, or who has merely evaded the first action by retreating or displacing the target.

c) The reprise of attack is a new attack executed immediately after a return on guard which may be even momentary.

d) Counter time is every action made by the attacker on a stop hit made by his opponent.

CHAPTER IV. THE FIELD OF PLAY (TERRAIN)

The ground shall have an even surface. It shall give neither advantage nor disadvantage to either the contestants, particularly with regard to slope and light.

The portion of the field of play which is used for fencing is called the piste (strip or board).

The strip is the material that provides the surface of the field of play: packed earth, wood, linoleum, etc.

In addition to the length of the field of play prescribed for each weapon, the strip should in practice be extended a distance of 1.50 meters (5 ft.) to 2 meters (6 feet, 7 inches) at each end to enable the competitor who is about to cross the limit of the field of play to retreat over a level and unbroken surface.

If it is impractical to have a regulation piste, the length of the piste must not be less than 13 meters (42 ft., 8 ins.) and must include the above mentioned extensions. See page 00.

CHAPTER V. WEAPONS, EQUIPMENT, CLOTHING

1. Responsibility of fencers. Fencers arm, equip, and clothe themselves upon their own responsibility, and at their own risk, subject only to the condition that the weapons, equipment, and

attire must conform to these rules. The fencers themselves are the only persons liable in any respect for any accidents which they may cause or suffer.

U.S. (clarification) – The following rules, insofar as they prescribe the specifications for the weapons, or relate to facility in judging or the acquisition of an unwarranted competitive advantage by one fencer over another, shall be strictly enforced by the president or other official in authority, insofar as deemed advisory but not mandatory upon the officials.

2. **Regulation weapons.** General description: All kinds of weapons are allowed, provided that they conform to the rules.*

The weapon shall be so constructed that it cannot injure either the user or his opponent.

3. **Control.** The Bout Committee, or else the Organizing Committee, shall appoint a special representative whose duty shall be to check the weapons, equipment, and clothing used.

This representative is required to reject any weapon which does not conform to the rules. He is further authorized to exclude any contestant whose equipment or clothing appears to him to be inadequate.

U.S. (additions) – (a) The president of the jury is empowered to exercise the function of this special representative whenever the occasion arises. (b) A contestant shall not be permitted to fence unless he has available for his personal use at least two complete weapons that conform to the rules. In competitions conducted with electrical weapons, this requirement includes at least two body cords in good working order.

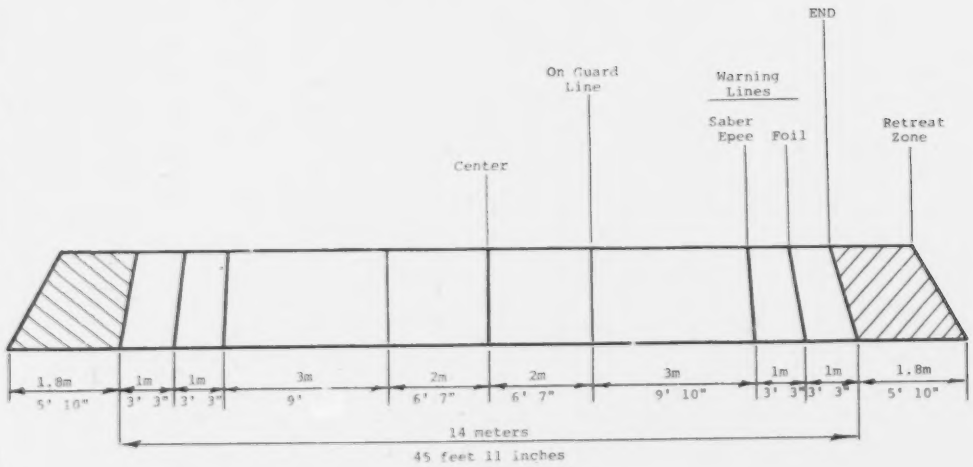
4. **Equipment and Clothing–General requirements.** The equipment and clothing shall comply with the following conditions:

a) The fencer shall have the maximum protection compatible with the freedom of movement necessary for fencing. For both men and women, when the jacket is cut horizontally at the waist, the lower edge must overlap the breeches by at least 10 centimeters (4 inches) when the fencer is in the "on guard" position. Women's equipment must include a breast protector made of metal or other rigid material.

b) It shall not be possible for the opponent to be obstructed or injured by the equipment; nor for the opponent's weapon to be caught or deflected by the equipment, which therefore shall have no buckles or opening in which, except by accident, the opposing point might be caught.

*Beginning with the 1973 season (September 1, 1972 to August 31, 1973), the flat tip is mandatory on all electrical foils for national and international competition.

THE REGULATION FIC AND AFLA FENCING STRIP



NOTE: The width of the strip shall be a minimum of 1.8 meters (5'10") and a maximum of 2 meters (6'7"). The length of the retreat zone shall be a minimum of 1.8 meters (5'10") and a maximum of 2 meters (6'7"). For foil and epee, the metallic surface of the strip shall cover the entire retreat zone.

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U.S. (addition) – In all weapons, the glove shall have a cuff sufficiently long to overlap the cuff of the jacket at all times, regardless of the movement of the arm, so as to prevent the passage of the blade into the sleeve at the wrist.

c) The judging of hits shall be facilitated as much as possible. The material of which the equipment is made shall not have a surface which is smooth enough to cause the pointe d'arret, the button, or the opponent's hit to glance off. Thus, the use of materials such as silk, satin, etc., is forbidden. All clothing shall be white and shall be made of strong material.

CHAPTER VI. THE ASSAULT

1. Method of fencing. The competitors fence in their own ways and at their own risk with the one condition that they must observe the fundamental rules of fencing. Every bout or match shall preserve the character of a courteous and sportsmanlike encounter. All violent actions, e.g. running attack (flèche), ending in a collision which jostles the opponent are absolutely forbidden.

All systems and methods of combat, including drawing back and displacing the body, sidestepping, turning, are allowed.

2. Exactitude of the hit. Every hit with the point in foil must arrive clearly and distinctly in order to count as a touch. Grazes with the point are therefore not counted as valid touches and do not annul anything that arrives later.

3. Method of handling the weapon. In the absence of a special device, the fencer is free to hold the handle of the weapon as he sees fit, and he may, if he wishes, modify the position of his hand during the course of the bout. However, the weapon shall not be transformed – permanently or temporarily, openly or by concealment – into a throwing weapon; it must be handled without the hand leaving the hilt or sliding along it, and without recapturing it with the fingers by the aid of a special device.

U.S. (addition) – Violation of this rule is punishable by the immediate annulment of any scoring action by the offending fencer and, after a single warning, by a penalty touch against him for each subsequent offense during the same bout.

Defensive actions must be effected exclusively with the guard and blade, separately or together.

The weapon shall be handled with one hand only, and with the same hand until the end of the bout, unless the president expressly authorizes a change of hands because of injury to the sword arm or hand; the use of unarmed hand or arm, either in offense or in defense, is prohibited. The punishment for violation of this rule shall be a penalty of one touch after a single warning in the course of the same bout.

U.S. (addition) – The punishment for violation of this rule in the United States shall be the immediate annulment of any scoring action by the offending fencer and, after a single warning, a penalty touch against him for each subsequent offense during the same bout. However, the unarmed hand may come in contact with the ground without violating this rule.

4. Putting on guard. The fencer who is called first shall place himself at the right of the president, except in the case where the fencer called first is left-handed and he is meeting a right-handed fencer in a bout fought without electrical apparatus.

The president shall require each of the contestants to stand so that his forward foot shall be 2 meters (6 feet, 7 inches) from the center line of the field of play (that is, behind the "on guard" lines).

The contestants shall go on guard, at the beginning and at all subsequent times during the bout, midway between the sides of the strip.

The fencers shall go on guard when the president gives the command "On guard," and the president shall then ask, "Are you ready?" Upon affirmative reply from both contestants, the president shall give the signal to begin combat: "Play!"

U.S. (note) – In the United States, the preferred command for the commencement of combat is "Fence!"

5. Beginning, stopping, and restarting the bout

a) As soon as the command "Play!" is given, the contestants may assume the offensive. Any movement which starts or arrives before the command to play shall be annulled.

The contestants may thereupon fence as they please, and at their own risk and peril, subject only to the condition that they observe the fundamental rules of fencing.

b) The cessation of combat is marked by the command "Halt!" except when something happens that modifies the normal and regular conditions of combat. As soon as the command "Halt!" is given, a fencer shall refrain from starting a new action; only the movement already under way can be counted. Everything that happens thereafter shall be absolutely invalid.

If one of the fencers stops before the command "Halt!" and he is hit, the touch shall be valid.

The command "Halt!" shall be given not only when the combat is normally at an end, but also if the play of the fencers is dangerous, confused, or contrary to the rules, or if one of the contestants goes off the field of play, or if in retreating he comes too close to the spectators or the jury.

c) After each touch counted as valid, the fencers are replaced on guard in the center of the field of play. If the hit is not allowed by

the jury, the fencers shall go back on guard at the place they occupied when combat was interrupted, thereby retaining the ground gained. The replacement on guard, and the renewal of combat shall be effected as provided above.

In bouts for several touches, the fencers shall change sides: outdoors, after every touch; indoors, when one of the fencers has received one-half of the maximum number of touches that he may receive. However, with the electrical apparatus, the fencers do not change sides during the bout.

d) The president cannot allow a fencer to leave the piste, save in exceptional circumstances.

6. Fencing at close quarters. Fencing at close quarters is allowed as long as the competitors can wield their weapons correctly and the president can, at foil and sabre, follow the phrase.

7. Corps à corps. The corps à corps is said to exist when the two competitors remain in contact; when this occurs the president must stop the bout.

8. Displacing the target and reversing of positions. Displacing the target, ducking, turns, and half-turns are allowed including the action of ducking during which the unarmed hand may come in contact with the piste.

But "reversing of positions" is not allowed; that is to say, if the original positions are actually reversed, the competitors are again placed in the positions which they occupied when the movement resulting in the reversal of the positions was initiated.

9. Ground gained or lost. When the order "Halt!" is given, ground gained is held until a hit has been scored. When competitors are replaced on guard, each fencer should retire equally in order to attain fencing distance.

However–

a) When the bout has been stopped on account of a corps à corps, the fencers are again put on guard in such a position that the competitor who has sustained the corps à corps is at the place which he previously occupied; this also applies if his opponent has subjected him to a fleche attack, even without corps à corps.

b) The competitors must not be again put on guard in such a way that a fencer who was in front of the warning line at the moment when the assault was stopped is placed behind this line if this competitor has not already been warned.

c) The competitors must not again be put on guard in such a way that the fencer who was already behind the warning line at the moment when the assault was stopped, is caused to lose ground.

10. Crossing the boundaries

a) Stopping the bout. When a contestant crosses any of the boundaries of the field of play with both feet, the president shall immediately call "Halt!" and shall annul anything that may have happened after the crossing of such boundary, excepting only a hit against such a contestant that is the result of an action initiated by his opponent immediately after the crossing of the boundary.

When one of the two contestants goes off the field of play, only a hit made by the fencer who remains on the field of play can be counted, even in the case of a double touch.

b) Rear boundaries and warning lines. When a fencer in retreating reaches his warning line for the last time with the rear foot, the president shall give the command "Halt!" and shall warn the fencer as to the remaining distance that he may retreat without crossing the rear boundary of the field of play. The president shall repeat this warning each time that the fencer, having regained ground, might reasonably be in doubt as to his position on the field of play. The fencers are not warned anywhere else on the field of play.

The fencer who thereafter crosses the rear boundary of the field of play for the last time with both feet shall be considered touched. However, if he retreats off the field of play with both feet without having been warned, he shall be placed back on guard at the warning line.

If, for practical reasons, the ground is not long enough to provide the regulation length field of play, each fencer shall be allowed to retreat off the field of play without penalty as often as is necessary to permit him to retreat for the full distance provided in the rules.

If a fencer who has crossed the rear boundary of the field of play that is shorter than regulation length is attacked, and he parries and makes an immediate riposte or he stop-hits, the touch so scored shall be valid. This provision shall not apply, however, to the fencer who has retreated off the field of play for the last time.

c) Side boundaries. A fencer who crosses one of the side boundaries with both feet is not considered touched; he shall be replaced on guard midway between the sides of the strip, but shall be penalized by the loss of 1 meter (3 feet, 3 inches) of ground. If the application of this penalty of 1 meter places the contestant with both feet behind the rear limit of the field of play, he shall be considered touched.

However, a fencer who "systematically" crosses one of the boundaries of the field of play with both feet – particularly in executing a running attack (flèche) – in order to avoid a hit, shall, after a single warning during the same bout, be penalized one touch. In addition to the warning, any touch received by such fencer immediately after the crossing of the boundary shall be counted.

Consequently, every touch scored by the running contestant while he is off the field of play shall be annulled, while any touch scored by him while on the field of play shall be valid, even if he goes off after having scored; in the latter event there is no question of a warning or penalty.

U.S. (clarification) – The one-touch penalty is applicable against the offending contestant each time after the warning that he goes off the field of play. Notwithstanding the provisions in the last paragraph, a running attack which results in a touch is subject to penalties in the event of a collision or unnecessary roughness.

d) Leaving the strip accidentally. A fencer who crosses one of the boundaries through an accident shall not be liable to any penalty.

11. Duration of the bout

a) The duration of combat shall be clocked exactly by a stopwatch. At the Olympic Games and the World Championships, the Bout Committee shall appoint timekeepers for all bouts. By duration of combat is meant the effective duration, that is, the total interval of time during which the contestants are fencing, or are at liberty to fence, exclusive of the time taken out for the deliberations of the jury and other interruptions. In women's foil the time limit shall be five minutes of effective combat, in four-touch bouts.

The president shall warn the fencers one minute before the expiration of the time limit allotted for effective combat.

b) If at the end of the time limit neither fencer has scored the number of touches required for victory, the procedure shall be as follows:

If one contestant is leading, the difference between the number of touches required and the number actually scored by the contestant who is ahead shall be added to the score of each fencer. Thus, the difference between the actual touch scores of the contestants shall be maintained.

If the two contestants have received the same number of touches (or no touches at all), they are considered to have each received the maximum touches minus one; and they shall fence for the last touch without limit of time. They are replaced on guard in the position which they occupied when the bout was interrupted.

12. Accidents–indispositions–withdrawal of a competitor. If a competitor is the victim of an accident which has been duly recognized, the president may allow him a period of rest only, and that for a maximum time of 20 minutes, in order that he may recover sufficiently to continue the bout.

In the case of one of several indispositions which have been duly recognized, the president may grant the competitor a period of rest for a maximum time of 10 minutes once only during the same match

(teams) or the same pool (individual) or the last 15 bouts by direct elimination.

The president may, on his own authority, require the withdrawal of a competitor whose physical inability to continue the bout is obvious.

CHAPTER VII. THE DIRECTION OF A BOUT AND THE JUDGING OF HITS

A. Officials

1. **President.** All bouts at fencing are directed by a president who is responsible for–

a) Directing the bout
b) Controlling the equipment
c) Supervising his assistants (judges, timekeepers, scorers, etc.)
d) Maintaining order
e) Penalizing faults
f) Awarding the hits.

2. **Jury, judges, and ground judges.** The jury consists of a president and four judges who, for official FIE events, shall always be amateurs and holders of FIE licenses.

U.S. (addition) – The jury at official AFLA competitions shall consist of amateurs in good standing except that, for divisional events, a jury may contain one or more nonamateur members of the AFLA if such a decision is made by affirmative action of the appropriate governing body. In emergency circumstances the jury may, in the absolute discretion of the Bout Committee, be limited to a president and two judges.

The Bout Committee shall make every effort to appoint juries that shall be as neutral as possible.

U.S. (addition) – The appointment of juries lies exclusively in the jurisdiction of the Bout Committee. The Bout Committee shall immediately replace any member of the jury whenever in its opinion such replacement is necessary or desirable, for any reason whatsoever.

By the acceptance of a position on a jury, each of its members is honor bound to respect the rules and to cause them to be respected, and to carry out his functions with scrupulous impartiality and the most sustained attention.

3. **Auxiliary personnel–Scorers and timekeepers.**

Whenever possible the organizers will appoint, on their own responsibility, scorers whose duty will be to keep the scoresheet and scoreboards, and a timekeeper whose duty will be to keep time for the duration of the bouts.

B. Judging by a Jury

1. Duties of the president. The president, standing at an equal distance from each contestant and as nearly as possible, about 4 meters (13 feet, 2 inches) from the field of play, shall pay special attention to the play as a whole and to the sequence of play (phrase d'armes).

2. Positions occupied by the judges. The two judges placed on the right of the president shall watch and verify especially the materiality of touches which may be received by the fencer on the left of the president. Similarly, the two judges placed on the left of the president shall watch and verify especially the materiality of touches which may be received by the fencer on the right of the president.

U.S. (addition) – The judges are required to stand about 1 meter (3 feet, 3 inches) behind and to the side of the opponent of the fencer whom they are watching. This position protects the judges against possible injury from the contestants' weapons and gives the president a clear view of the play of both fencers.

3. Method of judging

a) Procedure. The president is in charge of directing the bout; he alone gives the commands. However, any other member of the jury may give the command "Halt!" but only if he thinks that there may be an accident. Except in this case, the function of a judge is only to advise the president when he sees, or thinks he sees, a hit. He should do so by raising his hand.

As soon as a judge sees a hit (whether on valid target or not) arrive on the fencer whom he is watching, he must raise his hand to advise the president. All judging is conducted aloud and without the members of the jury leaving the positions which they occupy.

The jury is not bound by a fencer's acknowledgment of a hit as permitted by the rules.

The jury first decides the materiality of the hit(s). The president then alone decides which fencer has been touched according to the conventional rules for the weapon.

b) Materiality of the hit. As soon as the bout has been stopped, the president shall briefly describe the movements which composed the last sequence of play (phrase) before the command "Halt!" He then shall question the two judges watching one fencer to ascertain whether, in their opinion, each of the movements in his analysis has resulted in a hit on that contestant; he shall follow the same procedure for the other contestant.

When questioned, the judges shall reply in one of the following ways: "Yes;" "Yes, but invalid;" "No;" or "Abstention."

U.S. (note) – In the United States, the preferred answer for hits outside the target is "Off target" instead of "Yes, but invalid."

The president then shall total the votes cast on each side, the opinion of each judge being counted as 1 vote, that of the president as 1½ votes, and abstentions not being counted at all.

(1) If both judges on the same side agree in a definite opinion (either both say "Yes," or both say "No," or both say "Yes, but invalid"), the president simply accepts their judgment.

(2) If one of the judges has a definite opinion and the other abstains, the president may decide alone, since his vote prevails; if he also abstains, the decision of the judge who has a definite opinion prevails.

(3) If the two judges have definite but contrary opinions, or if both abstain, the president may decide according to his own observations; if he also abstains, the hit is regarded as doubtful.

(4) In the case of a double abstention, the president may, as an exceptional measure, ask the opinions of the two other judges if he considers that they were better placed to see the hit – for example: a riposte on the back made on a fencer who has made a flèche attack and has passed his opponent.

(5) A doubtful hit is never scored against the contestant who might have received it; but, on the other hand, any hit made subsequently or simultaneously in the same sequence of play (phrase) by the fencer who has thus been granted the benefit of the doubt must also be annulled. With regard to a touch made subsequently by the fencer who originally made the doubtful hit, the following alternatives must be kept in mind:

(a) If the new touch (remise, redoublement, or riposte) is made by a fencer who made the doubtful hit without any hit having been made by his opponent, this new touch shall be scored.

(b) But if the doubt concerns the surface on which the hit arrived (one "Yes," one "Yes, but invalid," and the director abstains), no other hit in that phrase can be scored.

(c) The same is true if, between the doubtful hit and the new touch by the same contestant, his opponent has made a hit that has been annulled because of the original "benefit of the doubt."

c) Validity or priority of the hit. After the jury has decided the materiality of a hit, the president – acting alone and without further consultation of the judges, and by applying the conventional rules for each weapon – shall decide which fencer has alone been touched, or whether there is no valid touch.

PART TWO: FOIL

CHAPTER IV. THE CONVENTIONS OF FOIL FENCING

A. Method of making a hit

The foil is a thrusting weapon only. Offensive actions with this weapon shall be made with the point and with the point only.

B. Target

1. **Limitation of the target.** The target for women extends from the top of the neck to the lines of the groin in front, and a horizontal line across the top of the hipbones, on the back and sides, excluding the arms up to the shoulders. The bib of the mask is not included in the target.

2. **Extension of the target.** Hits arriving on a part of the body outside the target shall nevertheless be counted as valid touches if the fencer, either intentionally or as a result of an abnormal position, substitutes a normally invalid surface for a part of the target.

3. **Hits off the target.** Any hit made directly or as a result of the parry by one of the contestants on a part of the body other than the target shall stop the sequence of play and shall annul all hits which are scored thereafter.

C. Clinches and Running Attacks

In foil, when a fencer systematically causes the clinch (corps à corps) – even without violence or unnecessary roughness – he shall be penalized one touch after a single warning during the bout. This rule shall be equally applicable to any running attacks (flèches) which systematically end in a clinch.

U.S. (clarifications) – (a) In the United States a fencer is deemed to cause the clinch "systematically" when the clinch is an intentional consequence of his method or system of play. Accordingly, a warning should normally be given on the first offense. Only a clinch that results from a fall or other accident, or one caused by the forward movement of both fencers, is excluded from this rule. (b) In the United States, the one-touch penalty against the offending fencer shall be applicable after a warning to each repetition of clinch during the same bout.

E. Judging of Hits at Foil

Foil competitions are judged with an electrical apparatus. This is obligatory for the official competitions of the FIE. In the case of all

other competitions, the organizers are obliged to make an announcement in advance if it is intended that they should be judged by a jury.

F. Materiality of the Hit

1. With a jury. See Part One, Chapter VII, Article B, "Judging by a Jury," p. 158.

2. With an electrical judging apparatus

a) The indications of the electrical apparatus can alone be taken into consideration for judging the materiality of hits. Under no circumstances can the president declare a hit unless the hit has been properly registered by the apparatus (except as a penalty as laid down in the regulations).

When using the apparatus it should be noted that–

(1) If both signal lights (white and colored) appear on the same side of the apparatus, a nonvalid hit has preceded a valid hit.

(2) The apparatus does not otherwise indicate whether there is any priority in time between two or more hits which it registers simultaneously.

b) The president will disregard hits which are registered as a result of hits – made before the word "Play" or after the word "Halt" – which are made on the ground (when there is no metallic piste or outside it) or which are made on any other object other than the opponent or his equipment.

A competitor who intentionally causes the apparatus to register a hit by placing his point on any surface other than that of his opponent will, after a warning which will be sufficient for the whole pool or match or the last 15 bouts by direct elimination, be penalized by one hit.

c) The president must, on the other hand, take in account possible failures of the electrical equipment, in particular:

(1) He must annul a hit which he has just awarded as a result of a hit registered as on the valid target (colored lamp) if he establishes, by tests made under his personal supervision before the bout has effectively recommenced[1] and without changing anything whatever of the equipment in use:

– either that a hit registered as "valid" against the competitor against whom the hit has been awarded can be made without there being in fact a valid hit;

[1] The fact that the president has called "play," or even thereafter a certain amount of time has elapsed, does not necessarily mean that "the bout has effectively recommenced" if the two fencers have maintained a passive attitude. In order that the bout should be considered to have effectively recommenced, the fencers should have engaged in a fencing phrase which could have affected the equipment in use.

– or that a "nonvalid" hit made by the fencer against whom the hit was awarded does not cause any hit either valid or nonvalid to be registered;

– or that a "valid" hit made by the fencer against whom the hit was awarded does not cause any hit either valid or nonvalid to be registered;

– or that the registration of hit made by the competitor against whom the hit was awarded does not remain fixed on the apparatus.

(2) On the other hand, when the president has decided that a hit made by a competitor has priority, this hit shall not be annulled if subsequently it is found that a valid hit made by the opponent is registered as nonvalid or that the weapon of the fencer against whom the hit was awarded is permanently registering a nonvalid hit.

(3) If a fencer's equipment does not conform to the provisions, a hit made off the target which is registered by the apparatus as valid will not be annulled.

d) The president must also apply the following rules:

(1) Only the last hit made before the fault was established can be annulled.

(2) A competitor who makes any modification in or changes his equipment without being asked by the president to do so, before the president has given his decision, loses all right to the annulment of the hit.

(3) If the bout has effectively recommenced (cf. note to article c) (1) above), a competitor cannot claim the annulment of a hit awarded against him before the said recommencement of the bout.

(4) The localization of a fault found in the equipment (including the equipment of the competitors) is of no importance for this possible annulment.

(5) It is not necessary that the failure found should repeat itself each time a test is made; but it is essential that the fault should be manifested to the president without the possibility of doubt at least once during the tests made by him or under his supervision.

(6) The fact that the competitor against whom a hit has been awarded has broken his blade cannot alone justify the annulment of that hit.

e) Whenever accidental causes make it impossible to carry out tests, the hit will be considered "doubtful."

f) If hits are registered simultaneously on both sides of the apparatus, and the president cannot establish the priority with certainty, he must replace the competitors on guard.

g) In accordance with the general rules, the president must stop the bout, even if no hit is registered by the apparatus, whenever play becomes confused and he is unable to analyze the phrase.

h) The president should also supervise the state of the metallic piste; he must now allow the bout to commence or to continue if the metallic piste has holes in it which might affect the proper registering of hits. (The organizers must make the necessary arrangements to ensure the rapid repair or replacement of the metallic piste.)

G. Validity or Priority of the Hit

1. Preface. Whatever method a president has used to make a decision regarding the materiality of a hit (either with the assistance of a jury or by the electrical judging apparatus), he then *alone* decides as to the validity or the priority of the hit by applying the following basic rules which are the conventions applicable to foil fencing.

2. Observance of the fencing phrase

a) Every correctly executed attack must be parried or completely evaded, and the orderly sequence of play (phrase d'armes) must be followed. The fencer who departs from this rule does so at his own risk. In order to judge the correctness of an attack, the following points must be considered:

(1) If the attack starts when the opponent is "in line" (i.e., "with the arm extended and the point threatening the target"), the attacker must first deflect his opponent's weapon.

U.S. 1 (clarification) – This rule applies even if the attacker is also "in line" at the start of the attack.

(2) If, upon attempting to find the opponent's blade to deflect it, the attacker fails to find the blade (derobement or trompement), the right of way passes to the opponent.

(3) If the attack starts when the opponent is not "in line," the attack may proceed by a direct thrust, by disengage, or cutover (coupé); or it may be preceded by one or more efficient feints which impel the opponent to attempt to parry.

b) The parry gives a fencer the right to riposte; the simple riposte may be direct or indirect, but to annul any subsequent action by the attacker it must be executed immediately, without indecision or delay.

c) If a composite attack is made, and the opponent finds the blade during one of the feints, he acquires the right to riposte.

d) Against composite attacks, the opponent has the right to stop-hit; but to be valid the stop hit must precede the conclusion of the attack by a fencing tempo (temps d'escrime); that is, the stop hit must arrive before the attacker has begun the final movement of the attack.

3. Judging of hits

Preliminary note. In explaining and applying the conventions, it is desirable to make clear the following: When, during a sequence of play (phrase), both fencers are hit simultaneously, there is either a simultaneous action (tempo commune), or a double hit (coup double, in contro).

The first, which is due to simultaneous conception and execution of the attack by both fencers, may fairly be regarded as involving no fault on either side; in this case, the hits exchanged are annulled even if one of them has landed off the target.

The double hit (coup double), on the other hand, is the result of a distinctly faulty action on the part of one of the fencers; consequently, the fencer who is in the wrong cannot derive any advantage therefrom. Accordingly, when a double hit occurs and there is not a fencing tempo (temps d'escrime) between the two hits:

a) The fencer who is attacked is alone counted as hit–

(1) If he makes a stop hit against a simple attack.

(2) If, instead of parrying, he attempts to evade the hit (passata sotto, inquartata, etc.) and does not succeed in so doing.

(3) If, after a successful parry, he makes a momentary pause which gives his opponent the right to retake the attack (redoublement, remise, or reprise of attack).

(4) If, during a composite attack, he makes a stop hit without having the advantage of a fencing tempo (temps d'escrime).

(5) If, having been "in line" (arm extended and point threatening the target), and having been subjected to a beat or a taking of the blade (prise de fer) which deflects his weapon, he thrusts or replaces his blade in line instead of parrying a direct action made by his opponent.

b) The fencer who attacks is alone counted as hit–

(1) If he attacks when his opponent is "in line" (arm extended and point threatening the target) without deflecting the opponent's blade.

(2) If he attempts to find the blade, does not succeed (because the opponent has escaped or deceived), and he continues the attack.

(3) If, during a composite attack, his opponent finds the blade, and he continues the attack while the opponent ripostes immediately.

(4) If, during a composite attack, he makes a momentary pause, during which time his opponent makes a stop hit, and he continues the attack.

(5) If, during a composite attack, he receives a stop hit that arrives at fencing tempo (temps d'escrime) before the conclusion of the attack.

(6) If he makes a hit by a remise, redoublement, or reprise of attack on his opponent's parry, which has been followed by a riposte which is immediate, simple, and executed in one period of fencing time without withdrawing the arm.

c) The fencers are replaced on guard (without a score)–

Whenever the president, in case of a double hit (coup double), is unable to determine clearly which fencer is at fault. When this occurs, he shall annul the hits and replace the contestants on guard.

(One of the most difficult cases to judge arises when there is a stop hit which has a doubtful time advantage against the final movement of a composite attack. In general, in such a case, the double hit results from the simultaneous fault of both fencers, which justifies the replacement on guard. The fault of the attacker consists of indecision, slowness of execution, or the making of feints which are not sufficiently effective, while the fault of the defender lies in delay or slowness in making the stop hit.)

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